

The Only Magazine Dedicated to the Effects of Weather and Climate on Roofing

ROOFING ELEMENTS

www.roofingelementsmagazine.com

WINTER 2022
Vol. 2, Issue 4

TOP 4 SNOW RETENTION MISTAKES AND HOW TO AVOID THEM

JOE KNOWS:
**FLASHING
A PARAPET
WALL**

**KEEPING
IN TOUCH**

+ VOIP COMMUNICATIONS
+ TWO-WAY RADIOS

ATTIC VENTILATION:
**A FIREFIGHTER'S
PERSPECTIVE**

DAMAGE REPORT:
**HURRICANE IAN'S
AFTERMATH**

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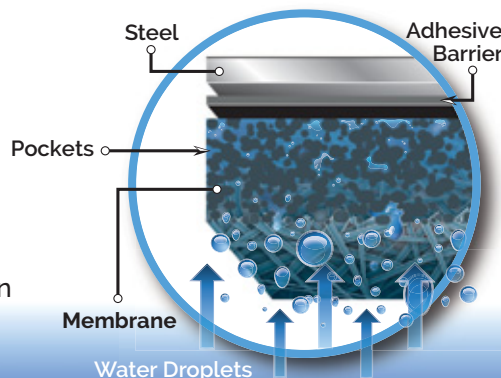
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WATCH THE RATES

We do trade shows as well as publish magazines. We own and promote the Garage, Shed & Carport Builder Show (Greenville, South Carolina, January 18-19, 2023) and the Construction Rollforming Show (Cincinnati, Ohio, September 27-28, 2023).

One of the dirty little secrets about trade shows is there are many hidden ways they make money. Rather than hide revenue streams, the honest thing to do to increase revenue would be increase the cost of attendance.

One thing that makes me angry is when I go to the show and the promoters are getting a commission on the hotel rooms. When you book rooms for a show (ours included) always check the room rates through independent sources like Expedia or Kayak, or call the hotel and do not reference the event.

The difference between the group rate and the common rate can be significant. Occasionally over \$100 per night.

I believe all businesses should be fairly compensated for their work. Part of compensation “being fair” is the purchaser knowing what they are getting for their money. If a show has 1,000 attendees and gets a commission of \$25 per room night that can easily be an additional \$30,000 or more. Shows are 100% about revenue, and it is fair and good to charge what the market will allow. Jacking up the accommodation rates when your clients think they are getting “a deal” just feels wrong.

If any of our hotels show a lower rate anywhere, please bring it to my attention. We have, as part of our agreement with the hotels, that we are guaranteed the lowest available rate for the days of our events. If that is not so, please let me know so I can make the hotel abide by the terms of our agreement and be certain you are treated fairly. ●

PROBLEM SOLVERS

In a nutshell, your services solve your customers' problems. In addition to exploring the impact of environmental factors on roofing systems, *Roofing Elements* is also meant to help you better serve your customers' needs and make your business more profitable.

This edition is absolutely loaded with features. Like last week's Thanksgiving turkey, you'll probably get your fill of information about ventilation and insulation in this issue. On page 12, you'll find an article about how insulation and ventilation work together, and the serious problems that can arise when they are improperly installed (or lacking).

Our friend Paul Scelsi returns with a fascinating story about Jason Verbeke, a roofer-turned-firefighter, and how his ventilation knowledge made him a better fireman. Verbeke has returned to residential roofing and has an important message he'd like to share with his fellow roofers. (page 36)

Because it's so impressive, I'd like to take a moment to bring special attention to the Project of the Month: The Vail Mountain View Condos. Complicated design, an extreme environment, and location all add up to it being a challenging project. As per the report from The Roofing Company, Granby, Colorado: “The layout of the metal roofs came with a long list of valleys, hips, oblong angles and created a large amount of waste. With the risk for blowing trash/ waste onto I-70, zero waste was allowed to be tossed off the roof. Each piece was cut down and lowered through the 3 ft. by 3 ft. roof hatch where it was carried to the fourth floor until it could be reached by a telescopic forklift with a hooper dumpster.” (See project details and photos beginning on page 46.)

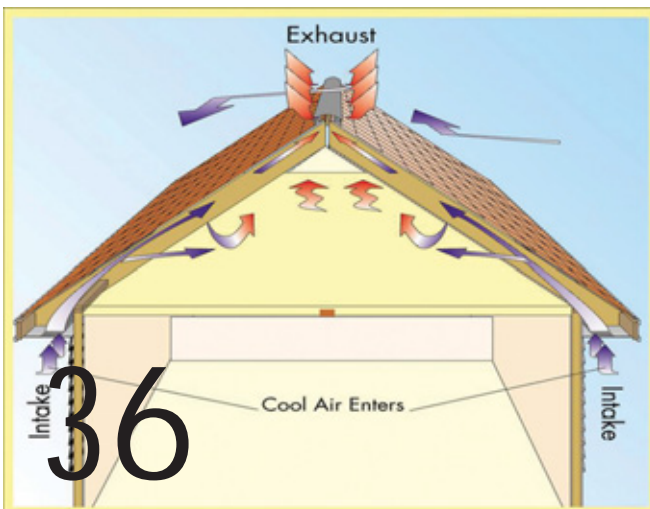
If you've recently completed a roof you think would be a great Project of the Month, give me a call or send me an email; I'd love to hear from you and there's no cost to having a project published!

Until next time — be well. ●

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ON THE COVER:
Snow retention system in place. PHOTO COURTESY OF SNOBLOX-SNOJAX

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Gary Reichert,
Publisher, Shield Wall Media

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GASPER ROOFING MARKS 50TH ANNIVERSARY

South Jersey's Gasper Roofing is celebrating 50 years in business. The company was founded by John Gasper in 1972. Current Owner, Jason Jimenez, bought Gasper Roofing from John Gasper in 2015. After 43 years John was ready to sell to someone who would continue his commitment to quality and customer service.

Jimenez speaks to the company's success saying, "I created a family within our community and have since served many customers. Our goal continues to be to mix in the same values and workmanship of John while incorporating the latest technology to help us grow."

Jimenez continued: "We will continue to stop at nothing to provide our commercial and residential roofing customers with unmatched service."

Gasper Roofing provides both commercial and residential roofing services, including roofing, siding, gutters, skylights, and more.



A team of Garland employee-owners preps for a volunteer day doing cleanup around the "Broadway Rising" development in Cleveland, which will combine affordable housing, commercial space, and the new home and programming space for University Settlement.

PHOTO COURTESY OF GARLAND CO.

GARLAND PARTNERS WITH CLEVELAND NON-PROFIT

The Garland Company, a full-service roofing manufacturer and building envelope solution provider based in Cleveland, Ohio, announced a 2022 partnership with local nonprofit University Settlement, highlighted by a recent "Spirit Week" employee charity drive that raised \$50,000.

University Settlement is a 501(c)(3) nonprofit that has been providing much-needed social services to the residents of the

Broadway Slavic Village neighborhood since 1926. Garland's Spirit Week activities included a silent auction, games, raffles, and other employee-led fundraisers throughout the week, with 100% of proceeds going to support University Settlement's mission.

Matt McDermott, President of Garland's US Roofing Division, said, "Our manufacturing and US headquarters have been located on East 91st Street since 1919, and our goal is to be an active contributor to the health and vitality of our neighborhood. The opportunity to partner with University Settlement and support our neighbors across Broadway Slavic Village was one that really galvanized our employees and resulted in what we feel was our best Spirit Week ever. The momentum has continued, as Garland team members have found a number of ways to support University Settlement with hands-on volunteering."

Added Earl Pike, Executive Director of University Settlement, "While the financial support is wonderful and appreciated greatly, our team also valued the discovery in Garland of a kindred spirit. As an employee-owned company, Garland's team is accountable to each other, they care for each other, and they have ownership of the work they do each day. Our goal at University Settlement is not just to empower our employees with that same feeling, but also the residents we serve."

The 100% employee-owned company began "Spirit Week" in 2008, and each year, selects a worthy nonprofit with whom to partner.

Asphalt Roofing Product Shipments

Shipments (squares)	Q3 2022	Q3 2021	% Change	YTD 2022	YTD 2021	% Change
Shingles – U.S. (including individual shingles)	39,434,939	42,061,550	-6.2%	127,883,943	132,173,509	-3.2%
BUR base, ply, and mineral cap sheets – U.S. (not including saturated felts)	1,819,677	1,635,375	11.3%	5,657,202	5,242,299	7.9%
Modified Bitumen – U.S.	9,639,903	10,434,575	-7.6%	30,955,689	30,874,968	0.3%
Shingles – Canada (including individual shingles)	3,084,234	3,331,361	-7.4%	10,540,153	11,298,062	-6.7%

ARMA RELEASES Q3 REPORT ON ASPHALT ROOFING PRODUCT SHIPMENTS

The Asphalt Roofing Manufacturers Association (ARMA) has released its Quarterly Product Shipment Report for the third quarter of 2022. The report covers asphalt roofing product shipments in the United States and Canada in the third quarter, as well as year-to-date shipment information and a comparison with the prior year's data.

"The shipment report provides valuable insight into the asphalt roofing industry to trade professionals and interested parties," said ARMA's Executive Vice President Reed Hitchcock. "Asphalt roofing data is relevant and meaningful to a number of industries."

Roofing product shipment data is collected from participating manufacturers by an independent third party, Association

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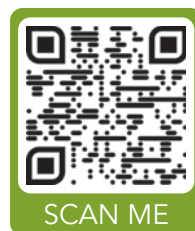
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Research Inc., and aggregated to create this report. Companies that are not members of ARMA may examine the free quarterly summaries, and those ineligible for ARMA membership can subscribe to the full, detailed report on the ARMA website.

BILL SHARPE JOINS MALCO PRODUCTS, SBC, BOARD OF DIRECTORS

Malco Products, SBC, one of the nation's leading solution developers and manufacturers of a variety of high-quality tools for the building trades, announced that Bill Sharpe was recently appointed to its board of directors.

Sharpe is a co-founder of Pathfinder Companies and Pathfinder Consulting, a Minnesota-based, privately held investment and advisory firm that provides long-term capital to privately-held family and entrepreneurial companies. His leadership experience and corporate strategy roles in mergers, acquisitions and investment banking spans three decades.



Sharpe currently holds three corporate board positions across a variety of industries. He received his undergraduate degree from the University of Minnesota and his MBA from the J.L. Kellogg Graduate School of Management at Northwestern University.

"We are very fortunate to have someone with Bill's strategic growth experience and knowledge joining our board of directors," said Rich Benninghoff, Malco president and CEO. "His deep expertise across many types of transactions and industries will bring a unique perspective to our board, and will be a tremendous resource for us as we move forward with our strategic planning and execution."

HOLCIM CLOSES POLYMERS SEALANTS NORTH AMERICA ACQUISITION

Holcim has completed the acquisition of the Polymers Sealants North America (PSNA) division of Illinois Tool Works. PSNA is a leader in coating, adhesive and sealant solutions with 2022 estimated net sales of US \$100 million. With more than 150 employees and manufacturing plants in California, Arizona, Texas, Georgia and Massachusetts, PSNA will accelerate the growth of Solutions & Products, especially in waterproofing and coatings. PSNA's innovation-driven approach is highly complementary to Holcim's existing building envelope business and is expected to generate significant synergies.

Jamie Gentoso, Head Solutions & Products, explains, "With PSNA we are broadening our waterproofing and coatings offering while delivering significant synergies with our roofing business. Building on their proven engineering and technical expertise, we will accelerate new product development and leading solutions together. I warmly welcome all PSNA employees into the Holcim family and look forward to investing in this business' next era of growth together. By expanding our building envelope offering, together we can play a bigger role in providing innovative and sustainable solutions for energy-efficient buildings."

PSNA's innovation-driven solutions are used in construction as well as other industries such as aerospace composites and wind energy. PSNA is positioned to capitalize on high-growth areas such as commercial re-roofing, green building and energy efficiency. This transaction adds to Holcim's other recent acquisitions in roofing and insulation, from Firestone Building Products, Malarkey Roofing Products to SES. Pro-forma net sales for Holcim's roofing and insulation business are on track to reach CHF 3.5 billion for 2022.

Firestone Becomes Holcim

As of October 3, 2022, for all uses that refer to a legal entity in the U.S. only, such as warranties, copyrights, and other legal and operation documents, Holcim has officially transitioned from Firestone Building Products Company, LLC to Holcim Solutions and Products US, LLC.

APPLE ROOFING PARTNERS WITH NMC EXTERIORS

Apple Roofing, a roof replacement and repair company with support centers in Plano, Texas, Lincoln, Nebraska, and Kansas City, Missouri has announced the acquisition of Plymouth, Minnesota-based NMC Exteriors.

Since 1999, NMC Exteriors has been offering residential and commercial insurance restoration services — including roofing, siding, and replacement windows — to homeowners and businesses in the greater Minneapolis area. The acquisition adds significant talent and capabilities to Apple Roofing's presence in the upper Midwest.

"This was an easy decision for the NMC Team," said Molly Mortenson, CEO of NMC Exteriors. "We are a proud small business focused on community and customer service; and this partnership gives our team the best benefits, advanced software, further opportunities to grow in their careers and to be a part of something larger," she continued.

"Our new partnership with Apple Roofing also brings many advantages from an operations perspective," said Nick Mortenson, NMC's Chief Operating Officer. "This gives us the

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opportunity to have deeper connections with insurance carriers and the business advantage to further expand our service areas in Minnesota and surrounding states all while doing what we love,” said Mortenson.

Reflecting on the overall process, the leadership couple’s industry perspective was a key driver in choosing Apple Roofing as a partner. “After more than 20 successful years we saw a change coming across our industry and decided to start looking for a company to partner with,” said Nick Mortenson. “We interviewed with multiple companies and after speaking with the people at Apple Roofing and Gauge Capital, we knew that we had found the right team for our family of employees,” he continued.

“Most importantly,” added Molly Mortenson, “We were looking for the correct cultural fit, commitment to customer satisfaction along with endless opportunities and support for our staff; and Apple hit all the core elements we were searching for — we’re absolutely thrilled to be a part of the Apple Roofing family. By joining Apple, our family just got bigger — we cannot wait to see what the future holds for all of us.”



PHOTO COURTESY OF ATLAS ROOFING CORPORATION.

ATLAS ROOFING CORPORATION ANNOUNCES PLANS FOR EXPANSION

As Atlas Roofing Corporation celebrates its 40th year in the roofing industry, the company announces it will invest \$200 million to build a new asphalt shingle manufacturing facility in the Midwestern US. This investment represents the next phase of a vision to empower its people to create solutions and products with purpose, while creating additional shingle capacity in a geographic location that best serves its customers. Construction is expected to begin in early 2023, with product shipments expected in the fourth quarter of 2025.

“Today Atlas looks to new horizons for growth of our steep

slope roofing category,” said Ken Farrish, president of Atlas Roofing Corporation. “We are thrilled to meet our customer demand with this investment in capacity in the Midwest, but we are equally excited to bring over 200 new full-time jobs to the region.”

Atlas plans to leverage a growing team of industry leaders to design and build a facility that focuses on safety, quality, and innovation. Safety and quality are the core of the company’s mission, as it ensures that the needs of both its employees and its customers are central to its planning and decision-making process.

“Atlas is committed to bolstering our capacity to support our customer base across the country and an investment in the Midwest meets that commitment head on,” said Stanley Bastek, vice president of sales and marketing for the Atlas Shingles and Underlayment Division. “This new manufacturing facility will result in service level improvements that increase access to Atlas shingles and system components across the country.”

In addition to expanding its roofing capacity, Atlas will manufacture products including roofing underlayment products and the company’s proprietary roof system components.

DRONEDEPLOY COMPLETES ACQUISITION OF STRUCTIONSITE

Reality capture platform DroneDeploy has announced the acquisition of StructionSite, a provider of intelligent project tracking software for the construction industry.

The deal closed on November 4, 2022, and the integration of both products’ core capabilities and teams is expected to proceed rapidly.

The combined technology, resources and expertise from this acquisition are set to create a feature-rich platform for reality capture – whether from the air, ground, interior or exterior.

“We are thrilled to welcome StructionSite’s team and customers to the DroneDeploy family,” said Mike Winn, CEO and co-founder of DroneDeploy. “Our team is ready to hit the ground running to deliver on something so many of our customers have been asking for: a reality capture platform that is unified and intelligent, but also automated – so they can quickly start to see the benefits of advancements in aerial and ground robotics.”

“The entire StructionSite team is excited to be joining the DroneDeploy family,” said Matt Daly, former CEO and co-founder of StructionSite.

Following the acquisition, Daly has joined DroneDeploy’s executive leadership team in a role that will focus entirely on planning and implementing the two companies’ strategic integration plan. Daly will be working closely with customers of both companies to ensure they experience the benefits of the unified reality capture platform as early as possible. ●



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MOISTURE CONTROL

THE RELATIONSHIP BETWEEN INSULATION & VENTILATION

By Snap-Z

Roof ventilation has been debated for ages. Building codes often require it, but it's one of those things that can sometimes be overlooked or misunderstood. What's more, the relationship between insulation and ventilation — and how both work together to provide your customers with the comfortable indoor environment they expect — shouldn't be underrated.

THE PURPOSE OF VENTILATION

The reasons to vent a roof depend on the climate. Without ventilation in hot climates, solar heat is trapped in the attic and makes the air-conditioning system work harder to keep the building comfortable. In climates with high humidity, a good roof vent system can prevent mold-causing moisture buildup in the attic. In colder climates, roof vents help keep the temperature of the roof deck as close as possible to the outside temperature, which helps prevent ice damming from thawing snow. If the climate has a mix of hot, cold or humid, then the purpose of ventilation can change with the season. Let's take a minute to look at ice damming.

ICE DAMS

An ice dam is a build-up of ice that collects on the roof eaves of a heated building. The heat from the building melts the upper part of the snowpack, which refreezes when it reaches the cold overhang. As more snow thaws, the water is trapped behind the dam and can find its way under the shingles or between metal panels into the building. The intruding water can cause mold or rot in the attic and/or walls. While it is a common cause, ice dams are not the only way moisture can enter a roof.

CONDENSATION

Condensation is seen almost any time hot air and cold air meet. Though it may be less noticeable with shingle roofs, it can be especially prevalent on metal roofs, which change temperature much faster than other roofing materials. Condensation can happen in warm, cold or humid climates. Condensation is most common in heated spaces or in unconditioned spaces with



Ice buildup at the eaves can cause severe damage.

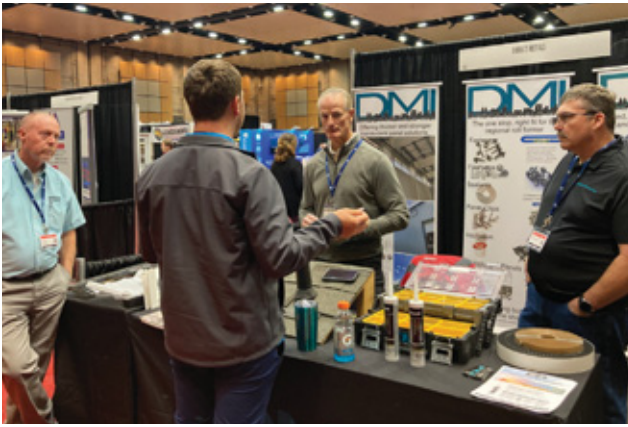
animals. Some animal barns have so much moisture that the condensate drips in the morning like a gentle rain. In a barn, that might not seem like a big deal, but it is a serious problem in a residence. If left unchecked, the excess moisture would likely cause dangerous mold, rot, and other structural damage.

A good ventilation system can help lessen the rate of condensation because the airflow is carrying the moisture out of the building. But ventilation alone doesn't always solve the problem.

VENTILATION AND INSULATION

It's common knowledge that insulation is great for improving energy efficiency. It keeps conditioned air from leaking into the attic or unconditioned air from passing through to the living space. Without proper insulation in hot climates, your customers are almost certainly going to be wasting money on higher energy bills as heat beating down on the roof radiates into the attic and transfers into the living space. This heat transfer makes air conditioning units work harder to keep the building comfortable.

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In colder climates, insulation keeps heat from being lost through the ceiling and keeps the cold air out. In either climate or a mixed climate, proper insulation combined with good ventilation can mean huge savings on your customers' energy bills. But, without insulation, air from the conditioned space below can cause condensation on the underside of the roof deck.

To prevent condensation under the roof deck, the entire surface dividing the conditioned space from the unconditioned space must be tightly sealed. For example, if there are any gaps between joists, if the recessed lighting canisters are not completely sealed, or if the insulation doesn't go all the way to the top plate, energy loss is guaranteed and ice dams and significant amounts of condensation can occur.



The Snap-Z ridge vent.

Consider this example: A roofer who had paid meticulous attention to detail when retrofitting an existing home with a metal roof was called back after the homeowner reported their roof was leaking. The roofer was confused as to why there would be a problem; he followed the panel manufacturer's guidelines, he installed ice and water shield, and a ventilation system that included a ridge vent and vented soffits. Upon inspecting the attic, he discovered condensation along the back of the ice and water shield, which ran down the edge of the valley until it dripped to the ceiling below. He also discovered there was no insulation between the living space and the attic. The condensation was caused by warm air from the living space passing through the uninsulated attic to the roof deck. The only way to stop the condensation problem was to completely seal the attic floor and make sure it is well insulated all the way to the top plate of the walls. After convincing the homeowners that insulation was the solution (which took no small amount of effort), the roofer pulled up the floorboards and thoroughly insulated the space between the attic and the living space.

If the roofer would have included a trip through the attic during his first visit, when he was quoting the job, he could have

FREQUENTLY ASKED QUESTIONS

What is a good ratio of roof ventilation intake vs. exhaust?

Slightly more eave ventilation than ridge ventilation is recommended to create negative pressure that will always be pulling the air up and out of the attic.

How do I determine net free-vent area (NFVA)?

Building codes specify 1 sq. ft. of NFVA per 300 sq. ft. of attic space. First, divide the square footage by 300 sq. ft. Second, divide that number between the eaves (60%) and ridge (40%). And finally, divide that by the NFVA-per-ft. rating of the ventilation product you are using to find the linear ft. of intake and exhaust that is needed. Many roof ventilation manufacturers have online calculators that can help with these calculations.

Can you use ridge vents without soffit vents?

A ridge vent without a soffit vent doesn't work. Stale, moisture-laden air escapes through the ridge vent. As it escapes, it pulls fresh air in through the soffit vents. If there are no soffit vents, air is pulled from the conditioned space, which means wasted energy and the potential for ice damming and condensation.

What about un-insulated metal buildings?

Many metal buildings used for storage or agricultural structures are not insulated. There is often a temperature difference between the outside and inside of the building, especially in the morning and evening. And, as a rule of thumb, whenever you have temperature differences, you're going to have moisture – often in the form of condensation on the underside of the roof. A good ventilation system can help, but it's most effective when combined with a vapor barrier.

spotted the lack of insulation and predicted the condensation problem. He could have guided the homeowners to a solution that worked for their home without the frustration and embarrassment of the callback.

Understanding how insulation and ventilation work together for a comfortable indoor environment will help you spot potential problems before they turn into callbacks. ●

About Snap-Z: In 2015, the Snap-Z ridge vent became an official product line of Glick Metals. Since then, different sizes have been designed, but the main design remains the same - a durable standing seam roof vent that makes metal roofing ventilation easier.

The Snap-Z and Glick Metal team remain focused on one thing: Following the commands of Jesus Christ by treating every roofer and distributor the way they would want to be treated.



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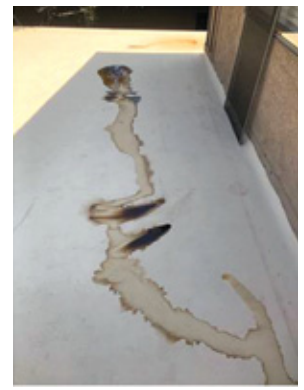
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Staining on low-slope roof surface from the upper level.

'TOBACCO JUICING'

WATER SOLUBLE RESIDUE FOUND ON ASPHALT ROOFING PRODUCTS

By The Asphalt Roofing Manufacturers Association (ARMA)

Editor's Note: *The Asphalt Roofing Manufacturers Association (ARMA), has prepared many technical reports to aid roofers in the proper installation of various roofing systems. ARMA [<https://www.asphaltroofing.org/>] has granted permission to publish this report for the benefit of roofers.*

The formation of a “tobacco juice” residue, so named for its color, has been widely attributed to the weathering of asphalt roofing (i.e., roof coatings, base and cap sheets, and shingles — to name a few) or the exudation of asphalt fractions from the roofing material.

In fact, similar brown residues have been found on other, non-asphaltic materials, indicating that the phenomenon can be environmental

in nature and not wholly attributable to asphalt roofing. An investigation of this phenomenon concluded that environmental contamination or pollutant deposition was the major contributor to tobacco juicing.

Factors commonly present with “tobacco juicing” are excessive air pollution accompanied by nighttime dew conditions and prolonged lack of rain. Air pollutants can collect on roof surfaces with the formation of dew and subsequently run down onto lower roof

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surfaces, fascia, and other finish surfaces. For steep slope applications, such as asphalt shingled roofs, tobacco juicing may drip off the shingles and stain the adjacent components (see photos on opposite page). This accumulation of residue can continue until the surfaces are washed or significant rainfall occurs. The residue typically will not affect the performance of the roof and should not be considered a performance problem.

For low slope applications, if any accumulation of this liquid residue occurs prior to coating, the proper bonding of coatings to the roof surface may be adversely affected. Preparation of the roof for coating should conform to the recommendations of the Roof Coatings Manufacturers Association (RCMA) and the Asphalt Roofing Manufacturers Association (ARMA) to help ensure proper adhesion. Coated smooth-surfaced roofing systems which are continuously subjected to tobacco juicing should be hosed off regularly, as tobacco juicing residue may cause the peeling of acrylic and aluminum coatings.

Though it may not be possible to control environmental elements that cause the formation of the residue, the following recommendations can be utilized by the specifier, contractor or owner to minimize the aesthetic conditions associated with tobacco juicing.

Require edge metal with a drip lip on parapet walls where the metal slopes outward, is rounded and has no existing lip on the outside edge to assure the residue-laden runoff will fall away from the building.

Hose down the roof at regular intervals during long, dry periods of the first summer after installation. Note: This is not recommended where proper fall protection is not in place, or where steps have not been taken to protect exterior surfaces that may come into contact with the wash-off, e.g., siding on a house without gutters.

For low slope applications, the use of an aluminum coating or acrylic coating can minimize the aesthetic conditions.

Coat all asphalt emulsions after they are thoroughly dried. Coat plastic cements and other solvent-based vehicle asphaltic products after they have cured for at least 30 days.

Consult the specific material manu-

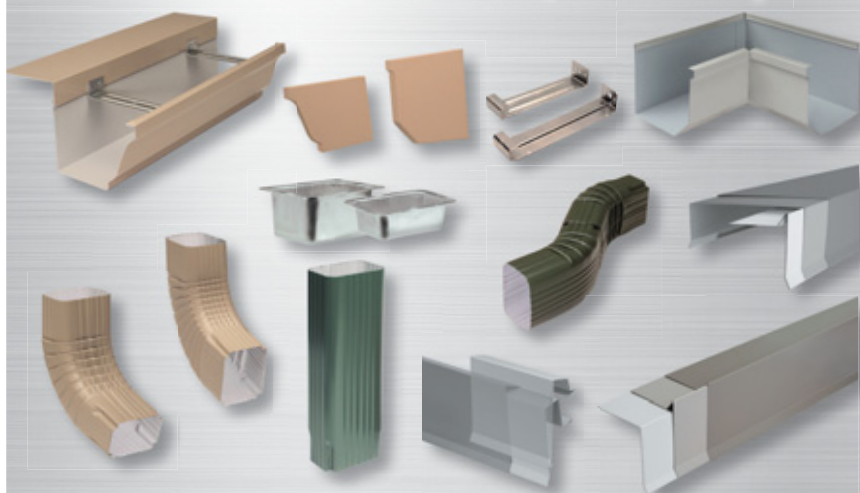
facturer for additional recommendations.

The effects associated with tobacco juicing can be minimized if the necessary steps are taken by the specifier, contractor and owner. ●

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DON'T GET SNOWED

TOP 4 SNOW RETENTION MISTAKES AND HOW TO AVOID THEM

BY HOWIE SCARBORO

Snow retention is no longer an art, it has become a science. The laws of physics have to be used when holding back thousands of pounds of potentially damaging snow and ice. Annual property and personal damage is estimated in the millions, but what dollar amount can you place on a human life and what is the potential liability risk to homeowners and business owners who fail to address this problem?

Simply put, a quality snow guard product coupled with a reliable and safe spacing layout will help reduce the liability associated with the sudden release of snow and ice on metal roofs. Here is a brief overview of the most common problems

we encounter when marketing snow retention systems and solutions on how to overcome them.

1 Product quality and testing: There are literally hundreds of snow guard designs to choose from so it can get confusing. We have tested just about everything we can get our hands on, every possible way to attach them to the panels and every possible layout design to make them more reliable and efficient. Due to some very basic rules of physics, the most efficient designs for pad style snow guards are those with a 3-inch to 5-inch wide forward mounted flat face with solid support struts and base. The material should be 100 percent

prime virgin grade polycarbonate that is UV stabilized. An alternative material is American Made 304 Stainless Steel. Round, pointed, angled and breakaway faces are not efficient at retaining snow, which is the whole purpose of a snow retention system.

When we are called upon to replace failed snow guard systems across the country, we find the most common guard used in the failed systems are cheap imports and imitations sold under various brand names here in the U.S. They are mass produced overseas and sold to distributors under different names with no regard for quality control, testing, proper layout or warranty. Regardless of where a guard is produced, it needs to be made of quality raw materials and should have published independent test results to back it up. Without the test results, there is no way to determine how strong the guards are and how many rows are required to control the snow load.

SOLUTION: Invest in a quality product, made in the USA by a reputable company willing to provide independent test results and replace them if they fail. The only thing worse than having to buy a snow retention system is having to buy a second one to replace the first one. Ask for the test data and the warranty. In the snow guard business, the difference between the cheapest guard and a quality guard is only a few cents, so shop for the best value, not the cheapest price.

2 Layout: The layout of the snow guards on the roof is the most critical element in the entire system. Remember: "If the guard is the heart of the system, then the layout is the backbone." Therefore the best value is in the correctly designed guard installed with a professional layout. We often find that many companies are quoting far too few snow guards for jobs in order to be the lowest bidder for the contractor. The result is an inferior layout destined for failure and possible liability for the building owner. Some snow guard companies offer product and layout assistance, but they are not willing to offer long term warranties or may even charge extra if

they do. Be sure to ask what the warranty is on the guards before you buy.

A reliable layout will have multiple staggered rows of guards, with each guard mounted in the center of the panel valley where the snow and ice actually moves. Guards should be designed to either mount on the flat of the panel or to straddle a minor or stiffening rib in order

to get in the center of the valley. There are even some versatile guard designs with interchangeable bases to mount either way.

The most common layout mistake is to only mount a row down by the eaves and call it a day. While we drive around and see this same misapplication every day, you need to know the reasons why it



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is wrong. (1) It gives sliding snow and ice too much room to build up velocity and damage the guards. (2) It allows for too much load on the lower roof section near the eaves, causing unbalanced structural load.

A proper snow retention layout will equally distribute the snow load across the entire roof section, minimize the run velocity with multiple rows and break up large snow fields by utilizing staggered placement. When we design layouts, we avoid doing anything that might do structural damage to the roof or panel damage due to unbalanced loading. The row spacing is not something to estimate or guess at based on what your neighbor's house has. It is determined by a number of factors including panel valley width, Ground Snow Load Rating, run length (peak to eaves distance), and pitch. This data is then matched with the strength rating of the product proposed for the project.

We have spent the last 35 years perfecting our layouts and were the first to offer the estimating software free to the public at www.SpacingTool.com. All that you need is your dimensions, pitch and ground snow load. A custom layout will be e-mailed to you showing the exact recommended placement and parts list needed for your project.

SOLUTION: Invest in a quality product that is matched to your panels and

take the time to verify your local ground snow load and pitch. Run a layout on SpacingTool.com and stick to the design. If you choose to use one of our products, you will have the assurance of a life-time warranty. Don't take layout advice from anyone that isn't willing to stand behind the design and replace what breaks. Ignore what your uncle, friend and neighbor did on their roof, trust the custom layout specifically designed for your roof and load factors. You'll get to lay on the couch watching the game while they replace their gutters after the next big ice storm hits.

3 Seam Mounted Snow Guards: As I said earlier, we have tested just about everything on the market for the past 35 years. We have seen a lot of unreliable designs, but the one that has perpetuated this is the seam mounted snow guard. I assume it has appeal due to its attachment simplicity, however it has some serious pitfalls. We replace seam mounted systems quite often and the seam damage left behind is stunning. This type of guard usually has set screws and mount directly to the high seam. Because the design puts the face on top of the seam, there is no possible way for the guards to stop the movement of snow and ice other than what is above the seam. Gravity keeps the majority of the snow load in the lowest part of the roof panel known as the valley which is locat-

ed below the face of the seam mounted guard. This is also where the snow and ice actually moves.

The other glaring issue is the seam damage, as snow and ice impact the sides of the guard's face, it tends to torque the guard back and forth. Because of the wide faces and narrow seam mount, there can be a lot of torque applied at the mount. This results in the guards being ripped from the seams leaving behind scratches, bent seams and possibly a voided roof warranty. These guards are usually made of cast aluminum rated in the 20,000- to 40,000-pound range, far stronger than even the heaviest standing seam. Therefore, if load is applied to only one side of the guard, the seam is often damaged from the resulting torque.

SOLUTION: Avoid mounting any system to a standing seam that isn't stabilized with bar and clamps at every seam. Use a bar system or adhesive mounted guards instead of individual seam mounted guards to protect the seams from damage. This distributes the impact force/load to all the seams, not just one.

4 Snow bar systems: We are often called upon to replace or redesign bar systems that were swept off the roof with last year's heavy snow. Once the gutters are back in place the next step is finding out what went wrong with the system.

There is no question that a properly designed bar system is extremely strong and reliable, but people will be people and they will cut corners out of sheer ignorance or budget concerns.

The first rule of snow retention is to equally distribute the load across the entire roof surface, not just hold it down by the eaves because it's cheaper to do it that way. Bar systems fail mainly for two reasons, the first is having too few rows of bars. The second is not clamping every seam. There are designs that simply don't perform as well as others, but let's focus on actual failures.

Having too few rows of bars is generally caused by the installer or property owner not following the recommended bar layout. The bars can only hold so much load before they fail and come apart, multiple rows keep the snow and ice from building

too much load/velocity as it slides. The second concern is that some bar systems only clamp every second or third seam in order to keep their system cost down. However, many warranties require that the system be clamped at every seam and some warranties even require inspections be performed by a manufacturer rep at an additional cost to the customer. In other words, the systems won't work unless they are clamped at every seam and multiple rows are properly spaced up the roof section.

SOLUTION: Only use a reputable bar manufacturer that provides layout and offers a free lifetime warranty on the parts and finish. You shouldn't have to pay extra for a product warranty to get it to work properly. Insist on using only square bar or flat extruded designs clamped at every seam; round bar has a tendency to allow the snow and ice to go through the bar. Also be sure that the ice stoppers mount perpendicular to



the roof panel, angled models will cause snow to "ramp" up and over the clip thereby defeating the purpose.

Follow the layout and check the clamp torque annually. A properly designed bar system will outlast the roof and whatever

Mother Nature throws your way. ●

Howie Scarboro is the national sales manager for SnoBlox-SnoJax. The company patented the first polycarbonate snow guard in 1976.

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CLEANER JOBSITES

GIVING CUSTOMERS A BETTER EXPERIENCE

Aron Beiler founded B&E Roofing in Lancaster, Pennsylvania, in 1987. He established his company by installing new roofs, but eventually ventured into roof replacements, which would be the inspiration for the invention of the Equipter Roofing Trailer.

Re-roofing projects have much more debris than new construction — tons more debris. “Six to ten thousand pounds of debris have to come off the roof during the re-roofing process,” Beiler specifies.

A lot of companies just chuck the tear-off debris onto the ground below to be picked up later. The additional cleanup effort slows work progress, adds unnecessary labor costs and can be frustrating for a skilled work crew. Debris discarded on the ground also makes the property look shoddy and can cause damage to the lawn and shrubbery. Beiler said a recurring complaint consumers file against roofers with the Better Business Bureau is messy worksites.

“I never wanted my crews to throw debris on the ground,” he expresses. “It’s a waste of time. It makes a messy jobsite and you have to pick it back up.” B&E used a dump truck, which was useful up to a point. Jobsites didn’t always have enough space to park in a spot that worked well. If there was a place to park it close enough to be accessed from the roof, it worked fine for a little while, but you still had to carry the debris across the roof to get to it. “We carried everything off the roof to the dump truck where it was parked on the driveway.”

While it made for a cleaner jobsite, carrying everything to the truck was tiresome and time consuming. He knew there had to be a better way to handle the tons of debris.

DEVELOPMENT

Beiler was a roofer for 16 years before coming up with the idea for the Equipter. Working on a roofing crew every day gave him the experience and insights he needed to solve the debris



Equipter 4000 used as a material lift and refuse bin.
PHOTOS COURTESY OF EQUIPTER

problem.

He knew he needed:

- something that would hold a large amount of debris,
- something that was portable and highly maneuverable,
- something that would operate under its own power, and
- something that had a footprint smaller than a truck and could be maneuvered into tight spaces.

“One thought led to the next and I came up with the concept for what is now called The Equipter,” he says.

What he came up with was an elevating, self-propelled garbage bin/trailer. Once he had that idea, it didn’t take long to turn it into reality. He commissioned a local company to build the prototype. “From the initial concept, within five or six months we actually had one on the jobsite,” he recalls.

It worked so well that they had a second one made for B&E Roofing. The third one was manufactured for a relative who used it for his business. “From there, it started branching out. Two years after that, we put up our own facility to manufacture the Equipter.”

FEATURES

"Even though some of the engineering was more challenging, I pushed for certain things," he explains. "I wanted to keep it under 6' wide. If you have a house with fence around it, and the fence has a gate, you need to be able to get through it."

He also wanted the lift to be engineered different than a scissors lift to make it more versatile. Once the box is lifted, it can be maneuvered back towards the roof. "The box will go straight back over the flowers and shrubbery so you don't have to be parked right up against the wall," he clarifies.

The Equipter is more than a motorized trailer. "It's towable so it's easy to get to the jobsite. You have a lot of equipment that's self-propelled but not towable. And you have a lot of equipment that's towable, but not self-propelled. The Equipter is both. You can hook it up and tow it behind a pickup truck, so you can move it without needing to put it on a trailer.

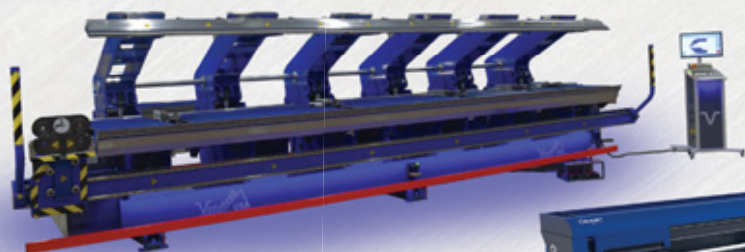
"And when you get it to your jobsite, you disconnect it from the truck and drive it around the property," he continues. It's propelled by a gas engine; the operator stands on a control platform to maneuver it around. "It's very mobile; it will get into



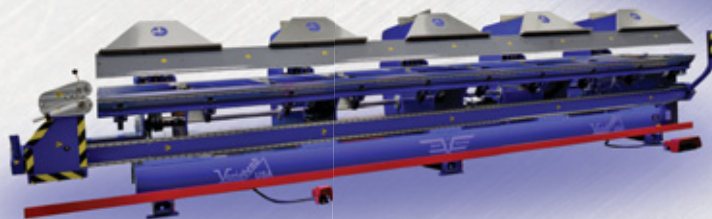
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tight spots where even your pickup truck won't fit."

The lids open to the sides and angle out, giving roofers a 10 ½' catch area. It's a little over 8' long so 8' material fits in the container and the lids will still close securely. "We were doing the job ourselves, so we knew what we wanted and needed it to do." It will hoist up to 4,000 pounds of material and has a hydraulic-powered tailgate for dumping. The capacity and maneuverability (aided by wide tires that don't track up the yard) work together to make quick work of transferring debris from the roof to a larger refuse container (trailer, dump truck, Dumpster), which can be left on the street rather than try to fit it on the property.

RAISING CUSTOMER EXPECTATIONS

When homeowners think about reroofing, they think about the impact that all the debris will have on their property, he says. "Most homeowners that you talk to will say they had their roof done, or a neighbor had it done, and it was a total mess. Homeowners were hiring B&E Roofing because they were impressed with our equipment and service," Beiler recalls. They knew B&E wouldn't mess up their property.

"Homeowners that know about the Equipter prefer to hire a company that has it," he says, "even if they're priced a little higher because it assures the homeowner that they have the equipment to not destroy the shrubbery, flowers, and yard."

GROWTH

Over the last six years, Equipter has grown from a very small facility to a three-building manufacturing compound with about 70,000 square feet of space. The manufacturing company started by making a single piece of equipment to help roofers; they now make five models to meet the needs of all businesses that need to move debris and materials.

"The Equipter now is going way beyond just roofing," Beiler expresses. "It's for debris management, whether roofing or restoration or remodeling. It's for fire and water restoration. Its momentum is building towards any debris management. For the roofing industry, it's great for lifting material. You put materials into it and it does extremely well."

Growing from a small, family-operated business to one with dozens of employees didn't happen without growing pains. "Four or five years ago, we grew to 40-50 employees," Beiler recalls. "At that point, we had to get more structured. It was very interesting. But that doesn't mean you have to sacrifice your culture. We get a lot of satisfaction from the fact that we work very much as a team. We thought we could continue with that family-like culture by putting key people in place. We work as a team and people enjoy working in that atmosphere. It makes it easier to function that way."

3 KEYS TO GOOD BUSINESS

1. Innovation. We're always looking for how we can improve our product. Either manufacturing or what our product does – we really focus on being innovative, which is what has made our product unique.

2. Excellence. From the beginning, we've focused on being simple and down to earth but still committed to excellence.

3. Relationships. We enjoy interacting with customers and with people within the company.

Like many businesses, the company has also experienced some supply chain issues. "We've noticed that since COVID, many manufacturers have struggled with having limited access to parts for their equipment. Equipter has mitigated the effects of the parts shortages by maintaining relationships with local parts manufacturers, like Beiler Hydraulics, that supply parts for our equipment designed and manufactured in Lancaster, Pennsylvania, instead of getting supplies from overseas."

CONCLUSION

Equipter specializes in problem-solving. "We have in-house research and development and engineering teams, so we're always working on ways to increase our equipment's efficiency and meet the evolving needs of our customers," Beiler says. "I can't say much right now, but I will say I'm looking forward to the future." ●



Equipter 4000 dumping.



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IAN'S AFTERMATH

ANALYSIS SHOWS FINAL ESTIMATED DAMAGES TO BE BETWEEN \$41 BILLION AND \$70 BILLION

CoreLogic®, a leading global property information, analytics and data-enabled solutions provider, has announced its final damage estimates for Hurricane Ian.

According to data analysis, total flood and wind losses are between \$41 billion and \$70 billion. This estimate (Table 1) includes wind loss, re-evaluated insured and uninsured storm surge loss and newly calculated inland flood loss for residential and commercial properties.

Peril	Impacted States			
	Florida	South Carolina	Other States	Total
Wind	22-32	1-2	<0.5	23-35
Flood ²	8-16	<1	<1	8-18
Wind and Flood Subtotal	30-48	1-3	<2	31-53
Uninsured Flood	10-16	<0.5	<0.5	10-17
Total Flood and Wind	40-64	1-3	<2	41-70

1. Values are insured losses unless otherwise noted.

2. Includes Private and NFIP insured loss for storm surge and inland flood. Losses to the NFIP estimated to comprise ~ 75% total insured flood loss.

Table 1: Hurricane Ian Estimated Residential and Commercial Flood and Wind Losses in Florida, South Carolina and Other Impacted States (\$ in Billions).

Flood loss from NFIP and private insurance for residential and commercial properties is estimated to be between \$8 billion and \$18 billion, which includes both storm surge and estimates for inland flooding.

Uninsured flood loss for this area is estimated to be between \$10 billion and \$17 billion.

Wind losses are estimated to be \$23 billion to \$35 billion.

WIND AND STORM SURGE LED IN DAMAGES

Inland flooding was extreme due to significant riverine flooding along Peace River in Arcadia, Florida, located south of Tampa and north of Punta Gorda, Florida. Peace River, which normally runs 130 feet wide, flooded to more than a mile wide due to Hurricane Ian surge and rainfall. However, this area is designated as a Special Flood Hazard Area (SFHA) by FEMA and housing is sparse in this location (see Figure 1).

“In many areas the flood extent approximates the SFHA boundaries, a clear indication that SFHA is a useful tool for city

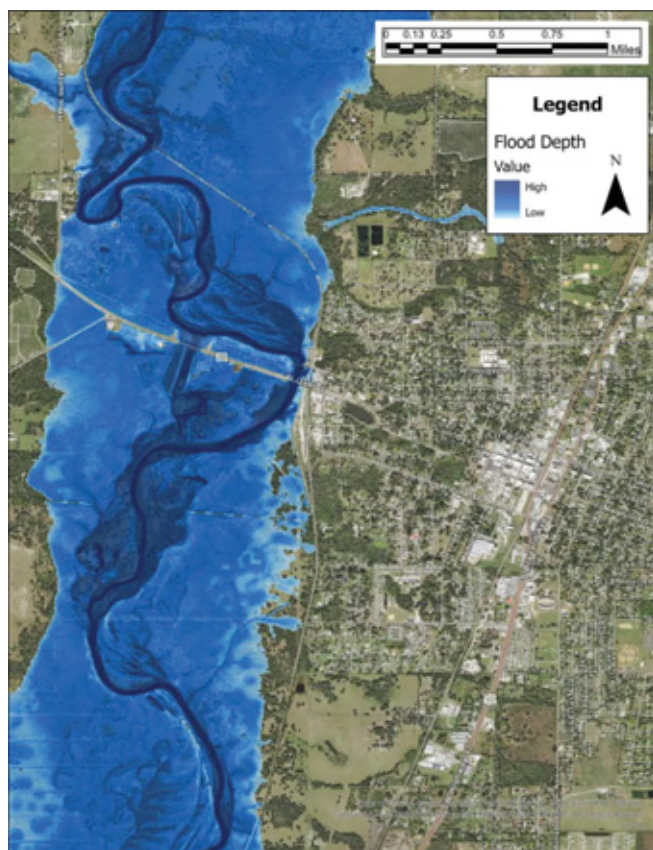


Figure 1: Flood Extent of the Peace River in Arcadia, Florida After Hurricane Ian.

planners who wish to understand flood risk and mitigate flood damages,” said Tom Larsen, senior director of Hazard and Risk Management, CoreLogic. “Without constraints in development in the SFHA, flood damages would have skyrocketed. Learning from this riverine flood event will help city planners make better decisions about where residential development makes sense, from standard construction homes to manufactured home communities.”

Hurricane Ian’s large wind field and landfall path caused severe wind and coastal storm surge damage along the densely populated coast. “The key reason Hurricane Ian is so

economically destructive is due to the massive growth in coastal real estate in Florida,” said Larsen. “Florida’s population has grown 50% since 1992 when Hurricane Andrew hit Miami, with disproportionately more growth in South Florida. The extra costs incurred from the surge in repair needs simultaneous with a fragile economy are headwinds to rapid reconstruction and we should expect to see resident displacement and housing affordability issues in the state for some time to come.”

HOUSING IMPACTS OF HURRICANE IAN

According to CoreLogic analysis, Florida had been a primary destination in the great migration trend of 2020 and 2021 due to the state’s lack of income tax and housing with lower cost per square foot than homes in major coastal metros like New York City and San Francisco. Additionally, residents have enjoyed increasing home equity gains throughout 2022, with homeowners reaching an average equity all-time high of nearly \$300,000. Disasters like Hurricane Ian, however, may put a damper on the state’s housing growth.

“Housing markets in Florida will face difficult times as many Florida residents have been impacted by the devastating storm,” said Selma Hepp, interim lead of the Office of the Chief Economist, CoreLogic. “Initially, we are likely to see an increase in mortgage delinquencies as is typical following catastrophes. Also, rents are likely to jump as households who lost their home

seek immediate shelter. Longer term, home price growth in hard hit areas is likely to lag that of the rest of the state and nation as people may opt to move to areas less prone to natural disasters. CoreLogic observed this trend in the Gulf Coast region following Hurricanes Laura, Delta and Ida.”

According to CoreLogic, [as of October 2022] more than 66,000 pending mortgage applications worth nearly \$22.5 billion are currently in progress in Florida, North Carolina and South Carolina and are in jeopardy from Hurricane Ian damages.

MORE INFORMATION ON DAMAGE ESTIMATES

Insured loss represents the amount insurers will pay to cover damages. Unlike wind damage, which is covered by a standard homeowners policy, flood is a separate coverage which is not mandatory outside the designated Special Flood Hazard Areas (SFHAs).

This analysis includes residential homes and commercial properties, including contents and business interruption and does not include broader economic loss from the storm. The inland flood analysis is based on the rainfall from September 25 to October 4.

The most up-to-date Hurricane Ian storm data, as well as reports from previous storms, are available at the CoreLogic natural hazard risk information center, Hazard HQ™, at www.hazardhq.com. ●

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PARAPET

BASE FLASHING ON A PARAPET WALL

The intersection between your roof and adjoining parapet walls present opportunities for leakage. These vertical plane intersections require a base flashing to defend against rain and control the flow of water. It's important to secure the junctures of your roof surface and a parapet with materials that will stay watertight.

Read on to learn how to install base flashing on a parapet wall, including inside and outside corners.

We'll start with step-by-step instructions for installing base flashing on a parapet wall using CertainTeed Flintlastic® SA Self-Adhered Membranes.

CertainTeed Products Used:

- Flintlastic SA Cap
- Flintlastic SA Plybase
- Flintlastic SA MidPly
- FlintEDGE® Coping
- Flintlastic SA NailBase
- FlintBond® Trowel or FlintBond Caulk

Steps to install base flashing on a parapet wall using CertainTeed Flintlastic SA Self-Adhered Membranes:

1 A proper base flashing detail actually starts in the field. Terminate your field membrane a minimum of 2" above the cant.

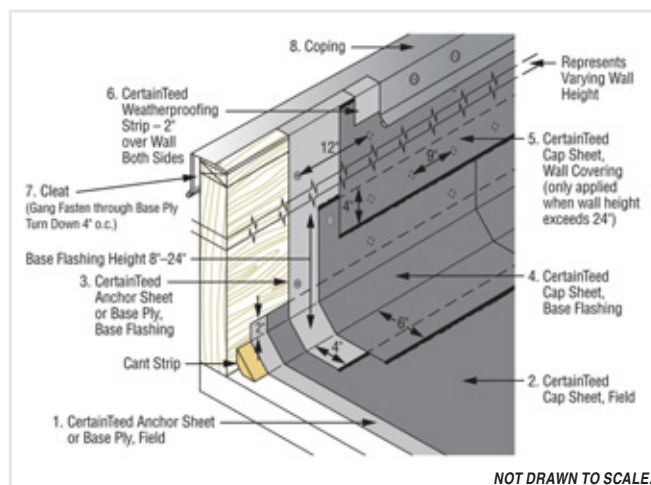
2 Then, on a maximum wall height of 24", start your anchor or base ply turned over the outside edge of the wall by 2" and extended into the field 4", overlapping any base flashing already in place by 4".

3 Nail that off with standard metal cap nails, 4" on center on the outside edge, with a minimum of 4 fasteners in any laps, and 12" on center in the field of the wall.

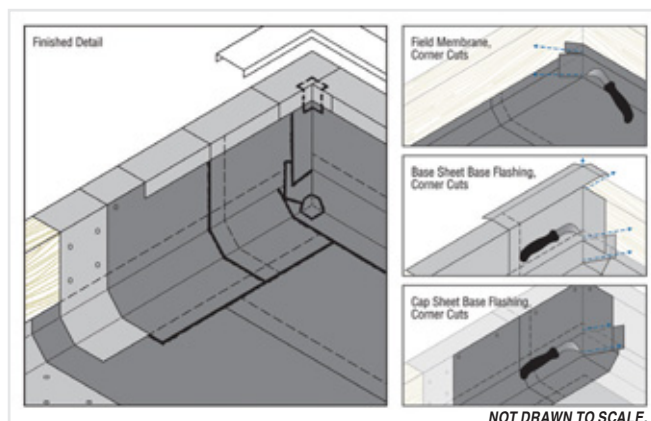
4 When working with Flintlastic SA Self-Adhered Membranes, where the base flashing overlaps the granulated cap sheet in the field, apply FlintBond SBS-Modified Adhesive – Trowel or Caulk Grade – to ensure a long-term bond.

5 Your cap flashing terminates at the top edge of the wall and extends 2" beyond the base in the field.

6 Even though the membrane is adhered, nail off the top edge using metal cap nails every 9" on center to prevent vertical slippage.



Base flashing - parapet wall.



Base flashing - inside corner.

7 Again, where the cap overlaps the granulated surface in the field, apply FlintBond SBS-Modified Adhesive – Trowel or Caulk Grade. Note that adhesive is not applicable for torch-applied systems.

8 Seal the top edge off with a bead of FlintBond Caulk.

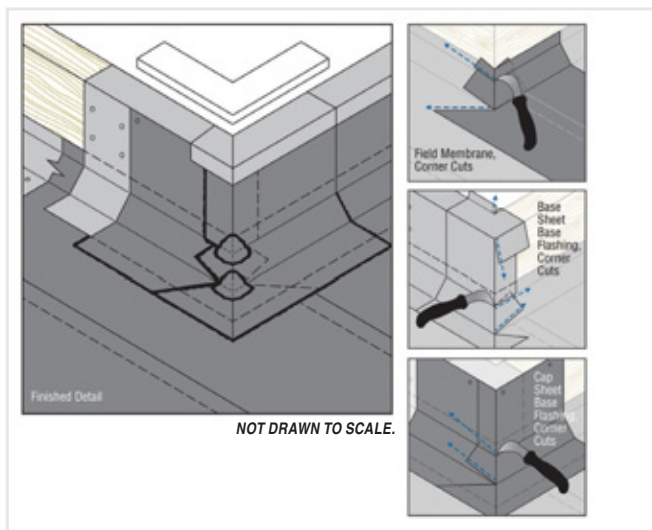
9 To prevent any granule contact with the underside of the metal, install a field-cut, smooth-surfaced weatherproofing strip turned down 2" on both the inside and outside of the wall. In this detail, I'm using Flintlastic SA PlyBase.

10 Last step is to install your FlintEdge Coping per published application instructions.

WALLS

BY JOE THOMPSON, CERTAINTEED

BASE FLASHING INSIDE & OUTSIDE CORNERS



Base flashing - outside corner.

Learn how to install **inside and outside corners for base flashing on a parapet wall** with step-by-step instructions using these products:

CertainTeed Products Used:

- CertainTeed Flintlastic SA NailBase
- CertainTeed Flintlastic SA Cap
- CertainTeed FlintBond

BASE FLASHING - INSIDE CORNER

1 When putting your field membrane in place, make relief cuts in all roofing layers to allow the membrane to take the shape of the corner.

2 Starting with your backer sheet, make relief cuts to accommodate the top edge downturn and the corner.

3 For the downturn, make a straight cut perpendicular to the wall out. For the corner, make a straight cut parallel to the wall out. The sheet will now drop into place.

4 At the bottom of the corner, the sheet will flex to indicate where the relief cuts are needed to accommodate the top and bottom of the cant. Mirror and repeat these steps on the adjacent wall. Make sure to round off your cuts.

5 When applying your cap flashing, no cut is necessary on the top of the corner, but similar relief cuts are required at the

bottom corner. Mirror those cuts on the adjacent wall. Make sure to round off your cuts.

6 FlintBond is required anywhere an overlap occurs onto a granulated surface – but is not applicable for torch-applied systems.

7 To ensure the bottom of the corner is watertight, affix one patch in FlintBond where the corner cut was made. CertainTeed does not dictate the shape of the corner patch.

BASE FLASHING - OUTSIDE CORNER

1 First, when putting your field membrane in place, make relief cuts in all roofing layers to allow the membrane to take the shape of the corner.

2 Starting with your backer sheet, make relief cuts to accommodate the top edge downturn and the corner.

3 For the downturn, cut on an angle from the wall out. For the corner, make a straight cut – parallel to the wall out. The sheet will now drop into place.

4 At the bottom of the corner, make a straight cut from the top of the cant and from the bottom of the cant on an angle. Mirror and repeat these steps on the adjacent wall. Make sure to round off your cuts.

5 When applying your cap flashing, no cut is necessary on the top of the corner, but similar cuts are required at the bottom corner. Mirror those cuts on the adjacent wall. Make sure to round off your cuts.

6 FlintBond is required anywhere an overlap occurs onto a granulated surface – but is not applicable for torch-applied systems.

7 And then lastly, to ensure the bottom of the corner is watertight, affix two patches in FlintBond where the corner cuts were made. CertainTeed does not dictate the shape of the corner patches.

These are parts 4-5 of the 5-part flashing series by CertainTeed's Joe Thompson. Watch Joe demonstrate these and many more step-by-step instructions in his videos at <https://bit.ly/CTJoeKnows>.



GETTING CONNECTED

CONSTRUCTION BUSINESS VoIP SIMPLIFIED

BY DEL WILLIAMS

For construction companies of every size, the pandemic accelerated the shift toward hybrid information technology solutions that facilitate both remote and in-office communications between customers and employees. In the marketplace today, this has increasingly involved mobile and office phones with integrated software that offer sophisticated voice, video, messaging, and workforce management capabilities.

This has augmented the complexity of the phone system requirements and presented construction businesses with a plethora of options. Users usually operate from office phones and mobile devices and are working more in and out of the office, so there is a greater demand for forwarding messages to avoid missing calls.

Also, a host of new services beyond calling are often expected such as Short Message Service (SMS)/Multimedia Messaging Service (MMS), video conferencing, visual voicemail, and call recording. On top of all this, the phone system is increasingly connected through APIs to existing company systems such as contact centers, workforce management, and Customer Relationship Management systems (CRMs), so important data can be monitored and evaluated in various ways.

The challenge for construction companies, however, has been dealing with issues of quality and integration, along with constantly escalating provider prices and add-on fees that can end up costing over \$70 per user each month. When managers need the services to stay operational but do not have the time or inclination to sort through complex billing, they can feel like a captive of their technology provider.

"Today, construction business owners feel besieged with all the software-as-a-service fees, which constantly creep upwards, never downwards in cost. They are enticed with low offers to start, and then the price doubles or triples on renewal or any

changes," says Eric Brackett, President of BTI Communications Group, a technology convergence provider serving the business and logistics sectors. The company acts as a single-source provider of complex phone (VoIP), network, and physical security systems, down to installation of wiring and conduit as well as cybersecurity monitoring and protection.

"Bait-and-switch phone system pricing is a huge burden on construction businesses when it becomes overhead and an operating expense," he adds. "Instead, managers want to capitalize the full cost over a few years or own the system with minimal operating expense."

In addition, businesses prefer a phone system that includes access to every service option from the start, whether used or not, at a low fixed monthly rate, which eliminates extra fees and complexity.

"Business owners and managers appreciate having only one line item on the bill that covers everything. When the prices don't change for a fixed period, this eliminates the issue of escalating expenses and surprise add-on costs," says Brackett.

He notes that such a system can improve both the customer and employee experience by integrating web services including voice, video, SMS/MMS, smartphone and PC, as well as contact center, CRM, and workforce management.

"Today, a construction business phone system needs to enable working from anywhere, whether at the office, at home, or on the go, and offer the full breadth of communication technologies," says Brackett.

He adds that some of the more advanced marketplace options are now easier than ever to incorporate and use. These allow business employees to use their own smartphones without purchasing new equipment since the service functions with almost every cellular provider. To streamline use, a web portal can enable users to take control and manage the entire system



VoIP systems like GoodPhone facilitate monitoring and managing the workforce from anywhere, and includes a web phone and smartphone app, a call statistics/call center dashboard, and real-time as well as historical reporting.

through a simple interface. Video conferencing also facilitates collaboration anywhere on any device, and some or all calls can be recorded and retrieved as needed.

OPTIMIZING BUSINESS TELECOM

Astral Energy of Montvale, New Jersey buys energy wholesale and sells it retail to over 15,000 businesses in the B2B market. Ashton Fox, Chief Operating Officer of Astral Energy, sought a more robust, stable solution than his existing telecom service provided.

“Many of our customers work off their smartphones on the road so texting and multimedia messaging is important to communicate with them. If our customers struggle to reach us or we are challenged to reach them because of our phone system, it doesn’t work,” says Fox.

“We were running into some issues with our provider’s call quality, SMS and MMS service, and technical support,” he adds. “We also wanted better pricing transparency. We didn’t want to find out that we really needed a certain feature later and be asked to pay more for it every month, which would impact our budget,” says Fox.

As a solution, Fox and Astral Energy turned to a new option in the business market called GoodPhone by BTI that provides web, voice, video, SMS, MMS, CRM, contact center, and workforce management service and integration for customers and employees. The service functions on smartphones and office phones, as well as on PCs used as phones.

Employees use the GoodPhone App on their personal smartphone so they no longer need to give out their personal cell information to handle business calls. Instead, they can provide clients with one office number to reach them, and make or take calls from their web phone, mobile app, or desk phone while always displaying the office number.

“Employees only give out one business number and all calls and texts stay within the portal on their smartphone or PC app. If a customer calls their number and they don’t answer it on their smartphone, the call can be routed to the company voicemail, not their personal voicemail,” explains Brackett.

The service also allows businesses to text promotions and contact customers via SMS and MMS messages, as well as track the responses. Employees can monitor messages and set auto-responses with customized text from one account. The service facilitates resolving customer issues by enabling the search of text archives with a 360-degree view of customer interactions. When video conferencing is required, the service currently allows up to 1,000 people to participate and up to 25 to share a screen.

Fox is pleased not only with the ease of implementing the service but also its quality and reliability. “The phones shipped to our office were already programmed, so I just had to plug them

in. They essentially handed me a turnkey system,” says Fox.

Fox appreciates that the technology integrator is not just a phone company, which he believes has helped improve system dependability. “The system is far more global and robust than what we had previously. It is very reliable, and we don’t have any issues. In a year we had less than 20 minutes of downtime, and they were very responsive in getting that resolved,” he says.

Fox credits the telecom service for easing his duties as a manager and COO. The service facilitates monitoring and managing the workforce from anywhere, and includes a web phone and smartphone app, a call statistics/call center dashboard, and real-time as well as historical reporting.

“As a manager, the way I can see and manage the whole back-end is important. Unlike many apps, the mobile app actually works and does not just direct you to a website or browser. I’m able to do virtually everything I can do on a desktop inside the app,” says Fox.

“I’m able to manage my team more effectively with the service,” he adds. “For instance, if there’s an issue with a customer on a phone call, I can quickly pull the recording on my phone to help resolve it.”

Other businesses are also finding value in simplifying the complexity of their phone systems.

Market Contracting Services, a construction firm in Chicago, Illinois, had remodeled their facility and planned to purchase landline phones for the office, but reconsidered when their technology integrator suggested another option, according to Esmeralda Macias, the firm’s office manager.

“With the new VoIP smartphones BTI has available, we don’t have to pay for landlines. We can see everything online now through a portal, so can view all incoming and missed calls,” she says.

According to Macias, employees no longer have to sit at a desk to take calls since they can do so anywhere they have an internet connection.

“Even after hours, we can transfer calls to our smartphones. This has translated into better customer support and more sales,” she says.

From a budgetary perspective, the VoIP phone system has also been a success. The system not only eliminates current carrier bills, but also includes unlimited local and domestic long distance.

Business telecom systems have long been complex and costly, leading to user frustration. However, with greater choice in the marketplace today, construction businesses that integrate essentially all required telecom services through VoIP phones at a fixed cost can streamline their operations and gain a competitive advantage. ●

Del Williams is a technical writer based in Torrance, California.

TWO-WAY RADIOS

CHOOSING COMMUNICATION DEVICES FOR YOUR CREW

By Stewart McClintic, HQ98

Working in the field requires a lot of communication between roofers, supervisors, and the office. For roofers to do their jobs they have to have a quality communication system in place. This system needs to allow workers to call for help when needed as well as communicate with their supervisors and co-workers.

Roofing crews, especially commercial roofers, cover large areas and communication can be sparse when workers are on opposite ends of the building. This is especially true when working on multiple buildings at a job site. The most common forms of communications roofers use are cell phones and two-way radios. Business owners can often have the difficult choice of deciding on which system is best for their workers. Let's look at these two forms of communication to help you determine which is best for your team.

CELLULAR VS ANALOG

Many people would consider cell phones to be the best form of communication when covering vast areas. Cell phones allow people to send and receive text messages, make, and receive phone calls and emails. Cell phones provide a level of convenience as people are more used to using these devices.

While being the most popular form of communication on the market cell phones can malfunction and not work for a variety of reasons like lost signal, dead zones, and short battery life. They can also be a distraction to workers as there are a multitude of applications one can use.

Cell signals are the most common issue with these devices. Cell phones require signals from towers often dozens of miles away and many interferences can take place. Line of sight in areas with many large trees and power lines can interfere with these signals making the phone not work. Two-way radios do not have these problems.

Two-way radios are easy to use, have many accessories, and often require no extra fees. Two-way radios are the only communication devices that allow team members to instantly contact each other while keeping their

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PHOTOS ARE COURTESY OF HQ98.COM

hands free when working on the job site. Also, addressing issues on the in the field can take place immediately improving workflow and customer satisfaction.

Durability is another key component when using two-way radios. Since most of the communication at a roofing job happens outside, you'll want to have equipment that can stand up to the elements. Many radios and accessories are available that offer protection from dirt and moisture.

Commercial roofers cover vast areas when working on large warehouses and other buildings which can make it difficult for ground crew members to stay in contact. Two-way radios offer excellent range allowing for clear audio even when covering long distances.

A downside to using two-way radios is the installation of antennas, repeaters, and emergency power when necessary.

APPLICATIONS

There are a few different ways you can use two-way radios at your business as they

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can improve efficiency and customer service. In the office team members can manage customers and speak with supervisors making sure everyone is being helped efficiently. You can also coordinate with team members and be prepared for any emergency situations that might arise.

Roofing crews can keep in touch and let each other know if there is an issue with any part of the building. For instance, there may be a large issue on one part of the roof and a special tool is needed to fix it. The person on the roof can easily grab their radio and call down to the crew on the ground to have it sent up instead of climbing down and wasting time. They can easily get in touch with other workers and get the machines and help needed to remove debris and repair any problems.

ACCESSORIES

There are many accessories available for two-way radios. Choosing the right ones will ensure that you get the most out of your investment in the radio system. Noise-cancelling accessories are helpful for roofers working on loud jobsites. Earpieces, and shoulder mounted microphones are great for workers as they



Motorola CP100D Digital With Display 2-way Business Radio has the ability to operate in both analog and digital modes. It meets U.S. Military 810 C, D, E, F and G specifications and IP54 IP standards. It is splashproof and dustproof for use in harsh environments.

allow for hands-free communication. Lastly, you always must think about power. A universal charging deck allows you to charge multiple batteries at a time allowing you to have power to stay connected.

Two-way radios have been around for decades and are proven to still be an effective form of communication over cell phones for commercial roofers, especially when needing to get in touch quickly and over large distances. There are many models to choose from that can fit your needs so contact a respected two-way radio provider to find



out what will work best for your roofing crew. ●

Stewart McClintic is the co-owner of HQ98.com, a two-way radio vendor located in Scottsdale, Arizona.

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ATTIC VENTILATION:

A FIREFIGHTER'S PERSPECTIVE

FIRST-HAND ACCOUNTS OF THE ROLE AIRFLOW PLAYS IN A ROOF'S LIFE AND THE OUTCOME OF A HOUSE FIRE

By Paul Soelsi, AirVent

Jason Verbeke was a residential roofing contractor before working 15 years as a firefighter in the Detroit, Michigan and the Charlotte, North Carolina areas. Today he's back full time as a roofer with The Allard Roofing Company, Fort Myers, Florida. In our podcast interview with him, Verbeke shared his first-hand observations of what happens to roofs over time when the attic ventilation is subpar. He also shared stories fighting fires on the "ventilation crew" responsible for cutting holes in the roof.

"The importance of attic ventilation on an active fire scene early and in coordination with the fire attack crew can make or break the outcome of the incident," Verbeke says. "And I have seen fairly new roofs that looked 25 years old due to lack of proper attic ventilation. I have seen sheathing that had moisture, even dry rotted, from the lack of or improper attic ventilation. I'm very passionate about attic ventilation and I've done quite a bit of studying and research on the topic."

Verbeke's background as both a roofing contractor and firefighter gives him

a unique perspective about airflow in an attic.

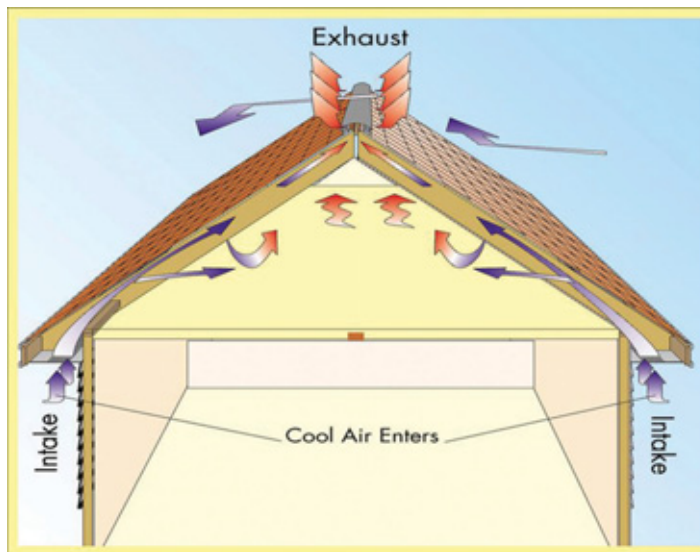
Part of his career as a firefighter Verbeke trained fellow crew members about how

roof requires a balance of intake and exhaust airflow, fighting a fire is aided by intake and exhaust air.

"One of our training sessions with the fire department was understanding the flow path of fires. In a UL (Underwriters Laboratory) study that was captured on video, they tried to push fires with the stream of water into other rooms in these burning house complexes. They tried to change the course of the fires," Verbeke explains. "What they realized is they can create chimney effects by introducing intake air and exhaust air to help fight the fire. Opening a front door, for example, introduces intake air. Your exhaust is the vent hole — which is the hole in the roof I so often cut as a firefighter."

Verbeke's experience walking roofs, working on roofs, and cutting holes in roofs as a roofing contractor gave him a skillset quickly recognized among the ranks in the fire company. Soon he was on ventilation duty climbing the ladder to the roof to cut the "vent hole" in the roof to help exhaust the heat and smoke during house fires.

"It pushed me to learn more about attic



a fire grows in size and how quickly it can happen. "A fire doubles in size every 30 seconds. When you consider a homeowner who realizes the house is on fire, calls 911, the fire company arrives on the scene, all the while the fire is doubling in size every 30 seconds — time is of the essence," Verbeke says.

BALANCED AIRFLOW TO FIGHT A FIRE

Just as proper attic ventilation for a

airflow and understand its importance both for fighting fires and for everyday roof longevity. When you cut a hole in the roof during a house fire you're trying to remove the superhot gasses and the heat as well as to improve visibility, survivability, and overall conditions within the interior of the structure for your crew and for anyone who might be trapped inside," Verbeke says.

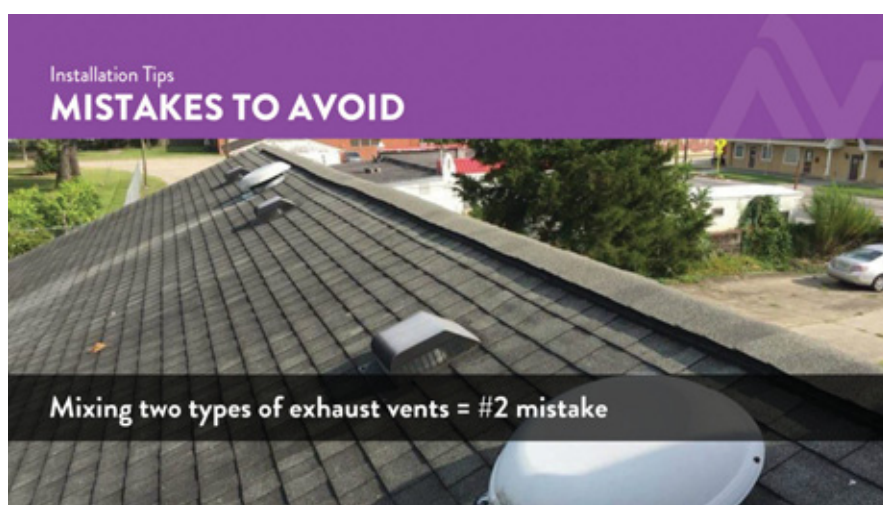
One of the first things Verbeke did upon reaching the roof of a house fire was "sound the roof," which is the process of determining how sturdy the roof is to climb on to cut a ventilation hole. "I've been on enough roofs as a roofing contractor to know if it's too soft or spongy to risk walking on. And it's either too soft because of the severity of the house fire or because it's been suffering from improper attic ventilation all this time," he says recalling his firefighting days.

Verbeke says it's essential for the fire-fighting crews to coordinate the tasks of venting the structure that's on fire and applying water to put the fire out for the best possible outcome. "If you introduce intake and exhaust air for the fire — which in effect brings oxygen to the fire that helps it grow — without being ready to apply water to the fire, the outcome can be bad. But if it's coordinated properly, the outcome can be good," he says.

BALANCED AIRFLOW TO PROLONG ROOF LIFE

A similar concept of coordinating tasks needs to happen when it comes to installing a new roof and understanding attic ventilation's role for that new roof, Verbeke says.

"When you're looking at an everyday roof and the attic, obviously it's not under fire conditions and that's not what I'm trying to say. But when you factor in 10, 15+ years of incorrect airflow in the attic and you consider manufacturer's warranty for their products for the roofing materials — both the shingles and underlayment — we're prematurely aging the roofs," Verbeke says. "We're making homes more energy efficient but not



allowing anywhere for the heat buildup to escape. As a result we're lowering the life expectancy of the roof. As a roofing contractor, we're doing a disservice to the homeowner if we don't have the knowledge ourselves."

Does the attic have the correct quantity of intake and exhaust vents? Check. Is anything inside the attic preventing the intake air from reaching the exhaust vents? Find out. Is there more than one type of attic exhaust vent on the roof above a common attic short-circuiting the airflow? Don't mix attic exhaust vent types. These are the questions Verbeke asks today as the "venting guy" at The Allard Roofing Company. He helped revamp the company website to help homeowners understand the

importance of attic ventilation. "An educated customer makes it much easier for us. And if they do not understand attic ventilation, we'll explain how the life of the roof is negatively impacted without proper intake and exhaust airflow," he says. ●

Paul Scelsi is marketing communications manager at Air Vent and leader of its Attic Ventilation: Ask the Expert™ seminars (airvent.com). He hosts the podcast, "Airing it out with Air Vent," and he's the chairman of the Asphalt Roofing Manufacturers Association Ventilation Task Force. He is the author of the book, *Grab and Hold Their Attention: Creating and Delivering Presentations that Move Your Audience to Action*.

BONDING POWER

SURETY BONDS CAN HELP ROOFERS WIN MORE WORK

BY JOSH CARSON, VICE PRESIDENT OF SURETY

Roofers who can obtain surety bonds can set themselves apart from the competition and win more work in any construction economy. However, this is especially true when the overall economy pulls back or goes into a recession. Surety Bonds provide project owners, lenders and general contractors a means of protecting themselves and creates an opportunity for roofers who can obtain them.

Following the Great Recession in 2008, many lenders and General Contractors required all subcontractors to provide surety bonds. With price escalations and rising interest rates, we may start to see these requirements again and roofers should start preparing so they can capi-

talize on new opportunities.

WHAT IS A SURETY BOND?

A Surety Bond is a three party agreement between a contractor (The Principal), a project owner (The Oblige), and a Surety Bond Company. The bond is a promise to fulfill an obligation to the project owner. If the contractor defaults on that promise, the surety bond company is responsible for correcting the issue or providing financial resources to do so. An Oblige could also be a lender such as a bank financing the project or another contractor such as the General Contractor on the project.

The most common types of surety bonds needed by roofers include Bid Bonds, Performance Bonds, Payment

Bonds and Maintenance Bonds.

Bid Bonds — Bid Bonds guarantee that if the contractor is the selected low bidder, they will enter into a contract for the bid price. Bid Bonds protect against contractors changing their bids, and provide the Oblige financial protection if they must rebid the project or use the second bidder.

A secondary purpose of a Bid Bond is to prequalify the contractor. Because the bidding contract must be approved by a surety bond underwriter, some project owners and contractors use this as a way of qualifying roofers for their project.

Performance Bonds — Performance Bonds guarantee that a project will be completed according to the contract and at the contract price. Performance Bonds protect the Oblige from cost overruns on the project and help guarantee completion regardless of any challenges the contractor may be facing.

Payment Bonds — Payment Bonds guarantee that certain subcontractors and material suppliers will be paid on the bonded project. This helps keep subcontractors working on the Oblige's project and protects the project from Mechanic's Liens.

Maintenance Bonds — Maintenance Bonds guarantee that a contractor will correct defective work and material during the maintenance period. These are also referred to as "Warranty Bonds" by some owners. Maintenance Bonds are



typically written for periods of 2 years or less. For roofers, it is common for a contract to require 2 year of maintenance on the construction and 20 years or more that is passed back to the manufacturer but not covered by the bond.

HOW DOES A ROOFER GET SET UP WITH A SURETY BOND PROGRAM?

Fortunately for roofers, getting a surety bond program is easier than ever. Bond companies are providing bonds on projects as large as \$1 million with a simple application and credit check on the owners. Larger programs may require the roofer to provide company and personal financial statements, banking information and prove they have the experience to complete the work.

Still, the surety bond market remains very soft and most roofers can easily obtain bonding. Roofers that have tried to get bonded in the past may be pleasantly surprised by changes in the bond market. It is better and more time consuming to get a program set up before the bond is required.

WHAT DO SURETY BONDS COST?

Most brokers do not charge for bid bonds. Premium is only charged when a contractor is awarded a project and performance, payment or maintenance bonds are issued. Generally surety bonds cost 0.5%-3% of the contract amount depending on the financial strength of the roofer. The simple credit programs are the easiest to qualify for but also tend to be on the higher end of that range.

Surety Bonds are generally priced as a package, meaning there is only one charge for a performance bond, payment bond and maintenance bond on a single project. Maintenance is charged per year though, so maintenance periods longer than 12 months generally have a surcharge.

OPPORTUNITIES FOR ROOFERS

As mentioned above, getting bonded provides roofers with opportunities to win additional work. Increasingly, owners on commercial projects are requiring roofers to provide bonds to protect themselves from price escalations, and labor shortages. It is not uncommon for a lender on a private project to require bonding as a condition of financing for the project. Not having the ability to bond can get the roofer disqualified from the project.

Even when bonds are not required, more owners and general contractors are asking for Letters of Bondability. These are letters written by a surety bond company or bond brokers stating that a roofer has the ability to provide bonds if required and in what amounts. It is becoming more common for these letters to be part of a General Contractor's bid requirements. Additionally, roofers can proactively provide these letters as part of their marketing and qualification packages to differentiate themselves from competitors. Roofers who are able to provide these letters can open more doors and win more work, even when a surety bond is not required.

OTHER BENEFITS FOR ROOFERS

Roofers may find other benefits to working with a qualified bond company as well. Surety bond companies review contracts for clauses and terms that may be harmful to a roofer. These include contingent payment clauses, flow down clauses, damages and other provisions that may harm roofers.

SURETY BONDS ARE NOT INSURANCE

Although they are often written by insurance companies, surety bonds are not insurance. In fact, surety bonds required indemnity, meaning that if

the bond company pays out a loss, they can seek reimbursement of the claim from the roofer and other indemnitors, which often includes stockholders and their spouses. In this way, surety bonds are closely related to a credit product. However, the bond company would not write bonds unless they believe the roofer could complete the underlying obligations.

PAYMENT BONDS PROVIDE ROOFERS WITH VALUABLE PROTECTION

Although getting bonded can benefit roofers by getting more work, working for a "bonded" contractor can provide valuable protection. Not getting paid for their work is probably the biggest risk that every roofer faces. One bad project could even be enough to take a roofer out of business.

Working for an Owner or GC with a payment bond provides protection to the roofer. Should the roofer not get paid in a timely manner or according to the contract, the roofer can file a claim against the payment bond. Often, notifying the bond company is all it takes to speed up the payment.

It is important for roofers to understand that many Owners and GCs are using Subcontractor Default Insurance. This product protects the GC only and does not protect the payment rights of the roofer. It is not a substitute for a payment bond. Although most roofers cannot only work for Owners and GCs on bonded projects, they should price their work accordingly when the payment protection is not available.

Understanding and getting set up with a surety bond program can open opportunities for roofing contractors. The process should not be intimidating and can be set up quickly in most cases. Including a bond letter in your proposal may even be the tool needed to win the project. ●

GUARDIAN HALO PROJECT

GUARDIAN ROOFING & GUTTERS AWARDS FAMILY NEW ROOF

Auburn, Washington-based Guardian Roofing & Gutters believes it's incredibly important to give back and take care of their community.

They believe "To whom much is given, much should be expected," so the company established the Guardian Halo Project.

Since 2019, Guardian Roofing & Gutters has hosted the annual Guardian Halo Project, an internal team lead project where one local homeowner in dire conditions would be gifted with a major roof repair or replacement. The local community is encouraged to nominate themselves or someone in need on the Guardian website to receive this life-changing prize.

THREE YEARS OF GIVING BACK

Over the course of three years and three rounds of the Guardian Halo Project, the team at Guardian Roofing & Gutters has awarded four new roofs to local families. In 2020, two recipients were awarded as both family's stories were

so unique and the need for support was so high. Last year, Guardian's Halo Project was awarded to the Lenihan Family and installed October 2021 after COVID-19 delayed the install several months.

"One day my wife got a call from Lori, the Owner at Guardian Roofing & Gutters, sharing with us that we were chosen to receive the free roof and remodel. They have just been amazing every step of the way," said Luke Lenihan.

After another round of nominations, the Vandenberg Family was notified in June of this year that they would be the recipient of the 2022 Halo Project award. The Vandenberg family have lived in their Maple Valley home for 18 years, but encountered recent hardship that prevented them from being able to repair their cracked roof and leaking skylights. To get by, they placed a tarp on their roof and covered the indoor furniture in plastic to protect it from the leaking water during heavy rains.

"As seniors on a fixed income, after receiving bids, we were trying to figure out how we could pay to have the work done.



The Vandenberg family (left) with Guardian Roofing & Gutters founder Lori Swanson.
PHOTOS COURTESY OF GUARDIAN ROOFING & GUTTERS



While waiting to afford it, other circumstances occurred that have prevented us from making repairs,” says Janet Vandenberg.

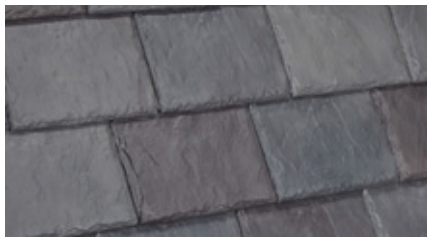
During the week of September 12, the team at Guardian installed the Vandenberg’s new roof, gutters, skylights and more. The project team included over a dozen individuals including roofing technicians from Guardian, along with volunteers. Partners

Owens Corning, Velux, Beacon, and Sounds provided free materials used during the install.

“Every year the Halo Project allows us to connect with the community in a deeper and more personal way than anything else we do. From start to finish, the Halo Project has proven year after year that it is more than just providing a free roof for a family in need; it’s the start of a lasting, close relationship with that family, the community involved, and everyone at Guardian. It really is a major highlight of our year,” says Luke De Monnin, Project Manager at Guardian. ●

The Vandenberg’s new asphalt roof, compared to the original roof.





DAVINCI® ROOFSCAPES PROVINCE™ SLATE

DaVinci® Roofscapes, a division of Westlake Royal Building Products™, has introduced a new single-width composite slate roofing tile. Province™ Slate, a 12"-wide tile with a fixed 8" exposure, evokes a historical nature with authentic natural slate appeal.

The tiles are modeled after actual slate and have a natural look that complements a variety of home styles. The Class A fire-rated and Class 4 impact-rated tile can also be used on commercial projects. The durable slate tiles resist severe weather, high winds, insects, algae and fungus growth.

"Province Slate is another slate tile in the growing DaVinci family of composite roofing products that offers timeless beauty, security and durability to a roof," says Mark Pagel, General Manager at DaVinci Roofscapes in Lenexa, Kansas. "Province Slate tiles are made of virgin resins, ultraviolet and thermal stabilizers, along with a highly specialized fire retardant. The result is a roofing tile that is ideal for any climate. Whether used at a seaside location with constant salty air conditions or in the snowy mountains of Colorado, Province Slate is right at home."

Each tile has rear side nail marking templates, an enhanced backside rib structure, and self-aligning edges for ease and speed of installation. "This is the cost-effective composite roofing product many people thought did not exist," says Pagel. "Province Slate opens the door to people having traditional slate single-width exposure on a home at a price that is competitive with architectural asphalt and other high-end roofing options."

"In addition, the choice of composite roofing means homeowners get a lifetime of low maintenance roofing at a cost that fits within most budgets. They also get a Lifetime Limited Materials Warranty that can save both roofing headaches and potentially on a homeowner's insurance policy."

The new Province Slate tiles are available in six of the most popular colors requested by DaVinci customers: Slate Gray, Slate Black, Smokey Gray, Castle Gray, European and Brownstone.

WestlakeRoyalBuildingProducts.com

HENRY® PRO-GRADE® 988 SILICONE WHITE ROOF COATING

Henry® has introduced Pro-Grade® 988 Silicone White Roof Coating with DPUR Technology. DPUR Technology helps keep roof surfaces cleaner longer to deliver long-lasting reflectivity and energy savings.

"We asked our customers what they wanted most in a silicone roof coating, and our Pro-Grade® 988 Silicone White Roof Coating with DPUR Technology is the answer," said Bart Rowland, Director of Product Management.

"DPUR Technology delivers long lasting reflectivity and energy savings, and also embodies Henry's constant push to provide our customers with the latest technology and right solutions for their needs."

Designed for professionals, Pro-Grade® 988 Silicone White Roof Coating with DPUR Technology is part of a complete portfolio of Henry® Pro-Grade® Commercial Roof Restoration Solutions that enable cost-effective, eco-friendly alternatives to re-roofing.

www.henry.com



BRASS KNUCKLE® KNEE PADS

When jobs literally bring workers to their knees, appropriate knee pads are critical. It's about a lot more than comfort; it's about protecting against musculoskeletal disorders (MSDs) and extending careers.

Jobs that rely on kneeling to perform tasks can put workers at significant risk for MSDs. According to the Bureau of Labor Statistics, MSDs are the most common injuries reported in these occupations. Personal protective equipment (PPE) in the form of knee pads can help reduce the risk of injury and minimize joint fatigue. Brass Knuckle® offers two levels of knee protection with BKKN100 Light-Duty and BKKN200 Heavy-Duty.

BKKN100 Light-Duty is an ethylene-vinyl acetate (EVA), cushioned, and adjustable knee pad. One-size-fits-all for convenience, a single strap with hook-and-loop closure customizes fit to keep the pad in place for hours of lightweight comfort and protection.

BKKN200 Heavy-Duty provides all-day protection with a hard, contoured polyethylene cap. The knee pad conforms to the shape of the knee cap to enhance patella stability and reduce risks of impact and injury.

It's high-level protection for tough jobs. The rounded, abrasion-resistant cap allows for safer pivoting and heavy-duty work on the knees while foam padding throughout maximizes wearer comfort. It also is one size with an adjustable strap to keep the pad where it should be.

www.brassknuckleprotection.com

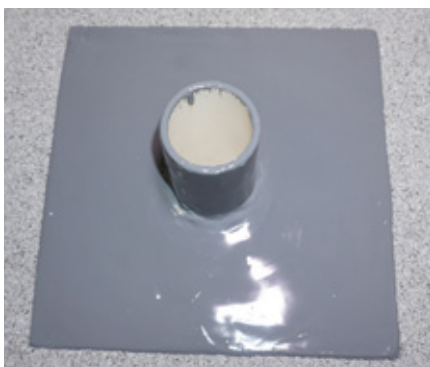


FLASHING-GRADE SILICONE

Progressive Materials, a manufacturer of silicone roof coatings, primers, and accessories, has announced its Flashing Grade silicone is now available in clear. This heavy-duty silicone is suitable for flashing prep, seam prep, or repairing cracks on commercial roofs. The newly available clear color works in tandem with the company's translucent skylight silicone or works as a utility coating that can be used on any colored surface to preserve that appearance.

It is available in 2-gallon pails and 20-ounce sausage tubes.

<https://pmsilicone.com>



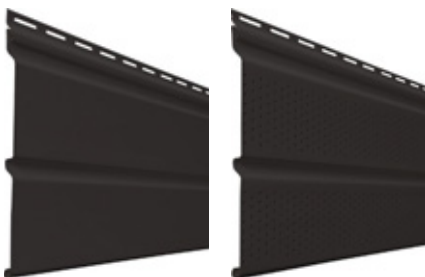
ELASTOPAV™ SEALING COMPOUND FOR ROOF FLASHINGS

Bitec Inc., a manufacturer of waterproofing and roofing membranes, has launched ElastoPav, an advanced premium sealant for roof flashings. The high quality, professional-grade flashing

compound offers professional roofers a fast-curing seal that can adhere to most any surface and withstand the most extreme temperatures — from -40°F to 200°F. Primarily used for rooftop prep phase for pitch pans and pipe penetrations, this new product is a solution for roof repairs, both vertical and horizontal, and sealing around chimneys, gutters, and roofing edges.

A one-component, fast-curing compound, ElastoPav uses advanced hybrid polymer technology. It reacts and cross-links in the presence of moisture to provide a durable seal that is waterproof and UV resistant. It can be applied to damp surfaces, and cures rapidly, reaching optimum strength within 7 to 14 days.

<https://bi-tec.com>



PROVIA COAL BLACK SOFFIT

ProVia has introduced Coal Black Soffit as an addition to the Universal vinyl soffit product line.

Building products professionals are aware of the popularity of trend-setting color choices for home exteriors — combining black and white, black and gray, and even black with black. This has created a high demand for black materials such as siding, roofing, soffit, and accessories.

ProVia's Coal Black Soffit provides the dramatic dark look that homeowners seek.

The product is available in a solid or vented profile. It will not warp or bend, and the color is fade-resistant. Like the company's vinyl siding, the soffit is covered by a Lifetime Limited Warranty.

www.provia.com

ASPHALT ROOFING MANUAL

The Asphalt Roofing Manufacturers Association (ARMA) has announced the release of the 2022 edition of the *Residential Asphalt Roofing Manual — Design and Application Methods*. This essential guide to the design and application of residential roofing systems is available directly from ARMA.

"ARMA is proud to provide educational resources for the roofing industry," stated Reed Hitchcock, ARMA Executive Vice President. "Our manual is a valuable resource that outlines the proper components of an asphalt roofing system."

This publication highlights several key topics for residential roofing systems, such as how to select the right asphalt roofing product for the job at hand, proper ventilation and moisture control, estimating how much roofing is required, deck preparation, shingle application, project safety, and much more.

asphaltroofing.org



HILTI NURON CORDLESS TOOLS

Hilti Group has announced the launch of Nuron, a 22V cordless battery platform. Launching with more than 70 tools, Nuron is the biggest launch in the company's history, covering areas including building construction, mechanical and engineering, interior finishing, heavy industry and steel and metal work.

Nuron's primary value proposition

is split into four key areas. Firstly, the power of one, which sees all tools powered by one single source, the 22V battery, making all batteries interchangeable and compatible with the full Nuron roster.

A second area of innovation is that the cordless tools provide more power than even corded or gas-powered tools, thanks to the reengineered batteries. The 22-volt cordless platform delivers high performance, which also enables heavy-duty applications that were once restricted to corded, gas-powered or higher voltage battery systems.

The third and fourth areas of improvement are in health and safety and the data driven services that link all Hilti tools to the cloud. The redesigned tools use real-world insights to improve the design and health and safety aspects of the tools. From

a practical perspective, tools have been redesigned to weigh less, with ergonomically enhanced grips and improved robustness through shock resistant bumpers. Hilti's Dust Removal System (DRS) and Active Torque Control (ATC) are available on the platform with relevant tools. Active Vibration Reduction (AVR), another key health protection and comfort feature, has been expanded to many more tools within the portfolio.

www.hilti.com

POLYGLASS POLAR SELF-ADHERED MEMBRANES

Polyglass U.S.A., Inc., a manufacturer of roofing and waterproofing systems, is extending roofing season once again with the seasonal release of Elastoflex SA V Polar Base® and Elastoflex SA P Polar Cap®.



Optimized for performance in colder conditions, these resilient roofing membranes save on labor and provide contractors the opportunity to extend roofing season.

Elastoflex SA V Polar Base and Elastoflex SA P Polar Cap allow for roof system installation in temperatures that are between 25°F-60°F (4°C-16°C). The products have unique qualities that improve efficiency and are designed for long-term performance. Elastoflex SA V Polar Base is fiberglass-reinforced for excellent dimensional stability and is finished with laylines for ease of application. Elastoflex SA P Polar Cap has a UV-stabilized granule surface and is polyester-reinforced for exceptional puncture and tear resistance. Polar Cap also features patent pending SEALlap® Ultra and patented FASTLap® for immediate and more effective bonding of side and end lap seams, saving time and labor costs.

"Polyglass' Polar Products are great for helping extend the roofing season with self-adhered installation window across all 12 months of the year in many of the cold weather markets. These products have optimum adhesion and provide superior bond to any other self-adhered membrane in the market," says Kevin Ferreira, Polyglass District Sales Manager.

Manufactured with ADESO® Dual-Compound Self-Adhered Technology, these premium membranes provide a clean installation, quick application speed, and eliminate the need for torches. Both base and cap sheets use an SBS (elastomeric) formulation on the top weathering side of the reinforcement and an aggressive self-adhesive formulation on the bottom side.

<https://polyglass.us>

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SURVIVING IRMA

PVC ROOF WITHSTANDS HURRICANE-FORCE WINDS

Thermoplastic PVC roofing is a durable material able to withstand thermal cycles, structural movement, temperature extremes, and wind loads. But can it stand up to some of the most destructive winds nature has to offer — hurricanes? After all, the worst hurricane can cause catastrophic damage, leveling frame homes and leaving entire towns in rubble.

The answer is a resounding yes; PVC roofing *can* survive the impacts of a hurricane. We know this because it already has no less of an authority than the roof of the Miami-based National Hurricane Center of the National Oceanic and Atmospheric Administration (NOAA). It's the

mission-critical command center for storm forecasting and tracking in the United States.

When the building needed a new roof, NOAA turned to PVC roofing. Just weeks after installation, Hurricane Matthew slammed into Florida. Although the Category 5 hurricane had weakened to a tropical storm by the time it reached Miami, the absence of any damage gave NOAA peace of mind about the new roof's capabilities. The roof performed just as well in subsequent storms, including Irma, a Category 4 hurricane that made landfall carrying sustained winds of up to 112 miles per hour.

What makes PVC roofing so durable? It's a combination of factors that start with heat-welded seams that form a permanent,

watertight bond that is stronger than the roofing membrane itself. It's also manufactured to remain watertight in extreme conditions, including constant dampness, ponding water, high and low alkaline conditions, and exposure to plant roots, fungi, and bacteria.

For holding up in hurricanes, a critical factor is that PVC roofing meets or exceeds wind uplift requirements. Properly designed PVC roofing systems provide durability and can meet or exceed the wind uplift requirements needed to obtain FM (Factory Mutual) approvals. Many membranes have survived the onslaught of hurricanes and can be designed specifically for storm-prone climates.

Could hurricane winds reach such intensity that even a mighty PVC roof might fail? Of course. But history shows they're a pretty safe bet.

ABOUT CHEMICAL FABRICS AND FILM ASSOCIATION – VINYL ROOFING DIVISION

The Vinyl Roofing Division of the Chemical Fabrics and Film Association (<https://vinylroofs.org/>) was created to educate architects, specifiers, building owners, and roofing contractors on the attributes of PVC/vinyl as a durable, reflective, heat-weldable material for single-ply roofing systems. Representing all of the leading manufacturers of thermoplastic PVC roofing systems in North America, the Division is committed to making available sound, scientifically backed information on the environmental and functional performance of energy-efficient PVC roofing membranes. ●



The National Hurricane Center of the National Oceanic and Atmospheric Administration (NOAA), located in Miami, has a PVC roof. The roof weathered Category 4 Irma without failing.

PROJECT OF THE MONTH



COLORADO CONDOS

HIGH-PERFORMANCE MATERIALS SELECTED TO WITHSTAND CLIMATE CHALLENGES

The Vail Mountain View Condos, a beautiful new residential development located in the coveted Vail Village, was built using energy efficient building products. It is the first major development in the village in over a decade. The luxury, multi-family building includes nine residences and six penthouses that range in price from \$7.4 million to \$9.6 million and are designed for the highest levels of energy efficiency, meeting industry-leading sustainability standards. This means the building has to manage the cold and heavy snow in winter and the heat and high-altitude sunshine of summer incredibly well.

Once the architecture, design and build team decided on their construction materials and plan, they faced multiple challenges during the project build. Because of permitting and other logistics, the roofing portion of construction had to begin in January 2021, during the height of the pandemic. The five-story residential building needed to be completed within a year and there was no time to delay the installation of the roofing

system until spring. The team needed to be meticulous in the execution and the building materials had to meet the stringent requirements of the task. The roofing contractor, The Roofing Company, needed a manufacturer with great customer service, high-performing building products and a company that could deliver the products on time.

ENERGY-EFFICIENT APPROACH

All building products selected for the project were extremely important to meet the high-performance and energy efficiency needs of the harsh Vail climate. Atlas ACFoam CrossVent™ was selected as a critical part of the roof system for the performance benefits of combining a cross-ventilating air space, nailable roof substrate, and thermally efficient continuous insulation. It provided both insulation and above-deck ventilation for the roof.

“ACFoam, and especially ACFoam CrossVent, are our go-to products and Atlas is one of the only manufacturers we can depend on to get us their product when we need it,” said



PROJECT OVERVIEW

PROJECT:

Vail Mountain View Condos

SIZE: 305 sq. total

LOCATION:

East Vale, Colorado

ARCHITECT:

Oz Architecture, Denver

INSTALLER:

The Roofing Company

MEMBRANE ROOFING (60 SQ.):

Georgia-Pacific DensDeck 1/2" roof board; Carlisle Insulbase 2.5" Polyiso; Carlisle 1/8" LF tapered Polyiso; Carlisle Sure-Weld TPO membrane & accessories in Gray; Roof Hatch

VENTED NAILBASE METAL PANEL ROOF (210 SQ.):

Georgia-Pacific DensDeck 1/2" roof board; Sterdo Wrap vapor barrier; Atlas AC Foam II 2 1/2" Polyiso rigid insulation; Atlas Cross Vent 4-1/8" nail base (5/8" OSB, 1" air space, 2 1/2" Polyiso); Carlisle WIP 300HT ice and water underlayment; CMG custom fabricated flashing and waterproofing for snow brackets; CMB fabricated and installed 24 ga. eave, rake, ridge, sidewall, headwall, receiver flashings; CMG 22 ga. factory painted snap-lock standing seam panels in Charcoal Gray; GAF Cobra Vent rolled ridge vent.

SNOW & ICE MITIGATION:

TRA-engineered & manufactured C2ZZ snow brackets with clamp-on pipe in Matte Black; KVA Ice Melt Rim System with Raychem 220V self-regulated heat cable installed on eaves.

HOT APPLIED ROOFING:

Hydrotech Monolithic Membrane, 90 mil; Hydrotech FlexFlash F reinforcement sheet; Hydrotech Monolithic Membrane 120 mil; Hydrotech Flex Flash uncured neoprene; Hydroflex 30 protection sheet; Roof Stop Heavy Duty Barrier; Hydrodrain 700

GUTTERS / DOWNSPOUT:

CMG 6" K-style gutter, Charcoal; CMG Box Gutters

METAL WALL PANELS:

Metal Sales TL-17 Panel, Mystique Plus, 600 x 6' panels

FASTENERS:

Include, but not limited to: Carlisle 8" fasteners, Atlas 9" fasteners

theroofingco.com



Roofing Company president and owner Jeff Johnston. “We needed a solution that not only met an R-value of 20 on the roof but also provided a fully continuous insulation solution. We’ve always had success using the Atlas products, so it was a natural solution for this high-profile project.”

More than 210 squares of Atlas ACFoam and ACFoam CrossVent were installed on the roof. Using a base layer of ACFoam under the ACFoam CrossVent insulation, with staggered joints, provided the desired higher R-value to mitigate undesirable heat loss, which is crucial in heavy snowfall climates like Vail, Colorado. Inadequate roof insulation and ventilation in a region like this can create major ice damming on roofs, which results in costly maintenance fees and/or expensive



repairs down the road.

Safety was paramount for the installation crew and the greater Vail community during this winter project. As the crew members battled ice and snow during the extreme weather conditions, the team continued forward, even when it meant a total of 280 hours of shoveling snow from the roof. Also, because the project was a mere 100 feet from Interstate 70, there was zero tolerance for loose objects flying off the roof and potentially injuring workers or motorists on the highway. All material needed to be secured to the roof deck using a combination of webbing and metal wiring.

The ability to be able to vent properly is critical for the performance and longevity of any building project, but especially on a steep slope roof in this climate zone. In the end, a challenging installation was overcome, and the roof can easily handle everything Vail Mountain weather can throw at it in a low-maintenance, energy-efficient manner.

Completed in October 2021, this project was awarded the honor of 2021 Job of the Year by the Colorado Roofing Association. ●

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RE WINTER 2022

CHECK WHICH TITLE APPLIES TO YOU:

- ☐ President
☐ Owner
☐ Partner
☐ General Manager
☐ Sales Manager/Rep
☐ Engineer/Architect
☐ Vice President
☐ Foreman
☐ Installer
☐ Other _____

PLEASE CHECK THE PRIMARY CATEGORY THAT DESCRIBES YOUR BUSINESS:

- ☐ Builder, Dealer, Remodeler or Installer
☐ Roofing Contractor
☐ Metal Roofing Contractor
☐ Building Material Dealer/Distributor
☐ General Contractor/Remodeler
☐ Manufacturer/Rep of Manufacturer
☐ Architect/Specifier
☐ Construction Consultant/Engineer
☐ Building Owner/Developer
☐ Other (Please Specify) _____

ENGAGED IN THE FOLLOWING APPLICATIONS:

- ☐ Gutters/Accessories
☐ Institutional
☐ Residential
☐ Agricultural
☐ Commercial
☐ Industrial

2023

JANUARY

Jan. 17-19

Carolinas Mid-Winter Roofing Expo, Benton Convention Center, Winston-Salem, North Carolina.

<https://crsmca.org/meetinginfo.php>

Jan. 18

Air Vent Ask the Expert Seminar, Grand Rapids, Mich. www.airvent.com

Jan. 18-19

Garage, Shed & Carport Builder Show, Greenville Convention Center, Greenville, South Carolina. garageshedcarportbuilder.com/show-registration/

Jan. 18-20

Chicago Roofing Contractors Association Trade Show, Drury Lane Conference Center, Oakbrook Terrace. crca.org

Jan. 19

Goats4Sales Roofing Workshop, Roofs By Don Design Center, Atlanta, Georgia. roofsbydon.com

Jan. 19

Air Vent Ask the Expert Seminar, Saginaw, Mich. www.airvent.com

Jan. 23-25

MCA Winter Meeting, Hyatt Regency in Clearwater Beach, Clearwater, Florida; www.metalconstruction.org

Jan. 20

Air Vent Ask the Expert Seminar, Novi, Mich. www.airvent.com

Jan. 26

Colorado Roofing Association Trade Show, Arapahoe County Fairgrounds & Event Center, Denver, Colorado. coloradoroofing.org

FEBRUARY

Feb. 12-15

SprayFoam 2023 Convention & Expo, Ocean Center, Daytona Beach, Florida; <https://www.sprayfoam.org>

MARCH

March 7-9

International Roofing Expo, Kay Bailey Hutchison Convention Center, Dallas, Texas; www.theroofingexpo.com ●

Recall Notice

CPSC Reannounces Recall of Portable Generators

Additional Finger Amputation and Crushing Injury Reported; New Repair Kit Available

Generac has reannounced the recall (Recall number: 23-040) of Generac® and DR® 6500 Watt and 8000 Watt portable generators due to the condition that an unlocked handle can pinch consumers' fingers against the generator frame when the generator is moved, posing finger amputation and crushing hazards. The firm has received a total of 37 reports of injuries, 24 resulting in finger amputations and five in finger crushing.

This recall involves 6500-watt and 8000-watt Generac portable generators with unit type numbers XT8000E, XT8000EFI, GP6500, GP6500E, GP8000E and HomeLink 6500E portable generators, and DR models PRO 6500M and PRO 6500E portable generators. This recall also involves all of these generators listed above purchased after July 29, 2021 through November 3, 2022, containing a repair kit which included full cover handle guards. The generators have gasoline-

powered engines that are used to generate electricity for use as backup power. The portable generators have two-wheels and a single, U-shaped, two-grip, flip-up pin-lock handle to help move the generator.

Consumers can check specific unit type, model number, and serial number location information at www.generac.com/service-support/product-support-lookup.

Consumers should immediately stop using the recalled portable generators, unless the locking pin has been inserted to secure the handle in place before and after moving the generator, and contact Generac for a free repair kit consisting of a set of spacers to move the handle away from the frame, eliminating the pinch point. Customers who had responded to the original recall will automatically be sent a new kit.

About 321,160 units have been sold. (In addition, 4,575 were sold in Canada)



Recalled XT8000EFI Generator

These portable generators were previously recalled in July 2021. They were sold at major home improvement and hardware stores nationwide and online, including Ace Hardware, Amazon, Blain's Farm & Fleet, City Electric Supply, Costco, Do it Best, Fastenal, Home Depot, Lowe's Stores, Napa Auto Parts, Northern Tool & Equipment, Orgill, Power Equipment Direct, Ravitsky Bros., True Value, and W.W. Grainger from June 2013 through June 2021 for between \$790 and \$1,480. ●

Community Anchor



Snap-Clad metal panels unify the walls and roof of this sleek bank building, pairing perfectly with warm wood elements. "We're hearing the bank has become an interesting and welcoming gateway for this all-new neighborhood."

-Tom Hurst, AIA, Dasher Hurst Architects

First Federal Bank, Yulee, FL Installing contr.: Taylor Made Roofing Architect: Dasher Hurst Architects
Dist.: ABC Supply GC: Auld & White Constructors Profile: Snap-Clad Color: Graphite Photo: hortonphotoinc.com

Snap-Clad
Metal Roof and Wall System
Graphite



**View the
case study
and video**

